

The background of the cover is a photograph of a city skyline, featuring several tall skyscrapers. The most prominent building in the center is the Willis Tower (formerly Sears Tower), with its distinctive black and white facade and ornate top. To the left of Willis Tower is the Chrysler Building, recognizable by its Art Deco style and pointed top. Other modern office buildings with glass facades are visible in the foreground and background. The sky is a clear, pale blue. The title text is overlaid on the upper half of the image in a white, sans-serif font.

# Aerozone District Trade School Public Private Partnership Models

Recommendations for a Workforce  
Education Partnership in the  
Aerozone Alliance

2020

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# Project Overview

In partnership with the Aerozone Alliance and supported by Raymond P. Park and the Park Family Foundation, Baldwin Wallace University researched potential “Trade School Models” to support employers in the Aerozone Alliance District.

The following report provides a research base, identifies key national workforce development programs, recommendations along with a recommended partnership model, and identifies next steps.

## COVID-19

During the timeline of the scope of work, the Northeast Ohio community experienced a catastrophic impact due to COVID-19. The incredible financial and social impact on individuals, families, institutions, businesses, and municipalities may be felt for a decade.

The entire landscape of workforce development continues to evolve as local city, county, state, and federal officials assess the impact of COVID-19 on their respective communities and collaborate to identify solutions to the ongoing crisis.



# Executive Summary

In collaboration with the Aerozone Alliance, Baldwin Wallace University researched various existing models, organize, plan, design, and present a recommendation for a “Trades School” Public-Private Partnership model.

The rationale for the project is to contribute to the development of the regional workforce, appealing to workers who will take away high school equivalency (GED), college credits, and trades training certification or some combination of each while contributing to the business development and employment opportunities in the Aerozone district.

The Aerozone Alliance organization received a \$50,000 gift from the Park Family Foundation for philanthropic support of the first phase of a process to research, organize, plan, design, and present a Trades School Public-Private Partnership.

The Trades School partnership MOU project offers recommendations for a stand-alone “polytech” school model providing wrap-around services to advance demonstrable success for participants and organizational sustainability.

## Recommendations

1. Adopt clear goals for any workforce development initiative and develop metrics as well as systems to track progress.
2. In the Aerozone District, identify one overall agency/entity to serve as the lead umbrella organization and create a space to connect service providers, potential employees & employer partners.
3. Connect the Aerozone Alliance’s workforce development priority to the Aerozone Alliance strategic planning process and bridge to the Cleveland Hopkins Airport Master Plan.

# Research Methodology

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## Methodology

To assist the Aerozone Alliance as it seeks to explore the workforce development and trade school models, Baldwin Wallace University conducted a benchmarking study to determine what industrial/economic zones, connected to air infrastructure, are doing to connect their industry employers, municipalities, and workforce strengths to strategic plans to new training and strategic structures.

The analysis aims to offer recommendations and provide insight into how the Aerozone Alliance might begin to optimize its relationships for this endeavor. The following analysis is based on a review of information drawn from organizational websites, research reports, publicly available data sources, and secondary literature. BW selected the research reports included in this analysis based on their success in adopting new and innovative workforce development and trade school models.

## Research Questions

1. What are some examples of successful models?
2. What are examples of some best practices?
3. How do these entities plan their work and work their plan?
4. How could such an initiative be organized in the Aerozone Alliance district?
5. Which parties could be part of the success of an initiative like this?

# Core Research Reports

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## Findings from the Literature

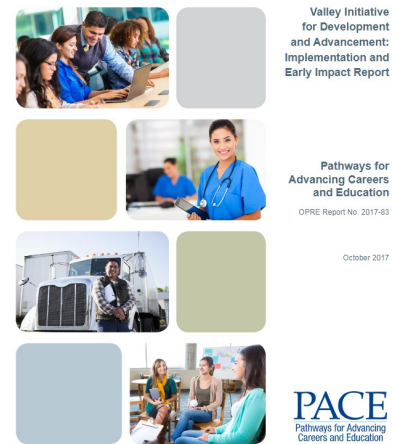
# Valley Initiative for Development and Advancement: Implementation and Early Impact Report

The primary goal of the Valley Initiative for Development and Advancement (VIDA) is “for participants to graduate with an associate’s degree or industry-recognized certificate in a high-demand occupation and find employment that pays a living-wage.” The organization operates in the Rio Grande Valley of Texas, along the Texas-Mexico border.

VIDA is “a community-based organization, is one of nine career pathways programs in the Pathways for Advancing Careers and Education (PACE) study sponsored by the Administration for Children and Families.” (p. 0)

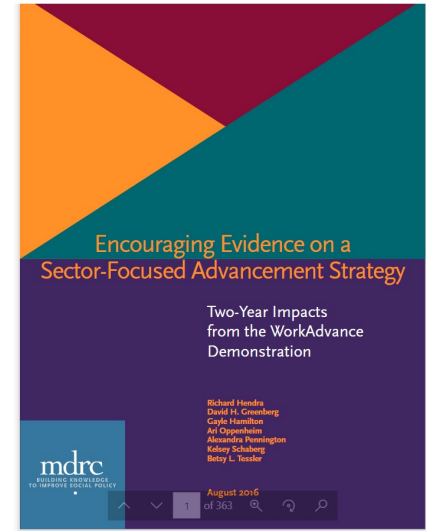
VIDA uses an innovative model that they describe as “support[ing] full-time enrollment at local colleges through required attendance at weekly intensive counseling sessions, as well as through substantial financial assistance. For participants who are not college-ready, VIDA offers an accelerated basic skills academy.”

Key Findings: “Using a rigorous research design, the study found that the VIDA program significantly increased the total number of college credits earned within a 24-month follow-up period. These effects are among the largest observed in rigorous studies of programs intended to increase low-income students’ enrollment and completion of post-secondary education. The program also increased rates of full-time college enrollment, enrollment more generally, and summer school enrollment. Finally, it increased the attainment of college credentials. Future reports will examine whether these effects translate into gains in employment and earnings.” (p. 0-1)





# Encouraging Evidence on a Sector -Focused Advancement Strategy Two -Year Impacts from the WorkAdvance Demonstration



“This report summarizes the two-year findings of a rigorous random assignment evaluation of the WorkAdvance model, a sectoral training and advancement initiative. Launched in 2011, WorkAdvance goes beyond the previous generation of employment programs by introducing demand-driven skills training and a focus on jobs that have career pathways.”

Key Findings from the report note that “all providers translated the WorkAdvance model into a set of concrete services, but it took time — more than a year for some components and providers — and a substantial amount of technical assistance and support. As a result, at some sites, later study enrollees were more likely than earlier ones to experience a fully implemented and “mature” WorkAdvance program.

Overall, WorkAdvance resulted in large increases in participation in every category of services, as well as in training completion, credential acquisition, and employment in the targeted sector, compared with what would have happened in the absence of the program. Expenditures for the operation of WorkAdvance fell between \$5,200 and \$6,700 per participant at the four providers delivering the program.

WorkAdvance providers increased earnings, with variation in results that closely matched the providers’ experience in running sector-based programs and the extent to which the services they offered were demand driven. The most experienced sectoral provider, Per Scholas, had large and consistent impacts on both primary and secondary outcomes. Madison Strategies Group and Towards Employment, providers new to sectoral training, had promising but less consistent results that grew stronger for later enrollees. One provider, St. Nicks Alliance, did not produce positive impacts. The results did not differ dramatically across subgroups, though encouragingly, WorkAdvance was able to increase earnings among the long-term unemployed.” (p. iii)



# STEM: How a Poorly Defined Acronym Is Shaping Education and Workforce Development Policy in the United States

STEM: How a Poorly Defined Acronym Is Shaping Education and Workforce Development Policy in the United States

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July 2014

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Oleson, A., Hora, M. T., and Benbow, R. J. (2014). STEM: How a poorly defined acronym is shaping education and workforce development policy in the United States. WCER Working Paper 2014-2. Retrieved from

This report identified a number of recommendations that focused on understanding labor market data and its use in workforce policy.

Key Findings include:

1. “Estimates of STEM jobs in the United States vary from 5.4 million to 26 million, depending on which occupations are included under the STEM umbrella and how STEM is determined (work tasks, knowledge, skills, degree field). This results in a significant problem with how the acronym is used in labor market analyses.
2. Many analysts overlook blue-collar occupations that require STEM knowledge, which results in (a) under-counting the number of STEM-related jobs, (b) inflating wage estimates for the STEM job category, and (c) under-estimating the value of non-baccalaureate postsecondary education.
3. When interpreting labor market data, policymakers and analysts should not make broad generalizations about STEM jobs or entire industries without carefully specifying the occupation (e.g., electrical engineering, front-line factory work) being discussed. to increase earnings among the long-term unemployed.” (p. iii)

The report identified two recommendations:

1. “When interpreting labor market data, do not make broad generalizations about “STEM jobs” or entire industries (e.g., manufacturing) without specifying the exact occupation (e.g., electrical engineering, front line factory work) being discussed;
2. Be explicit about the definition of STEM occupations being used in any given analysis and consider one of the two following options: (a) Use the standardized definition for STEM occupations developed by the SOCPC; or, (b) Employ comprehensive definitions of STEM occupations that encompass those that utilize varying degrees of STEM disciplinary knowledge (e.g., O\*Net knowledge scores) or those that may not require a bachelor’s degree (e.g., blue-collar occupations).” (p. 23)

# RELATIONSHIPS COME FIRST: How Four Career Development and Workforce Readiness Programs Prepare Young People for Work and Life

This report researched four programs that focused on 16-24 year old populations workforce and skills development. These programs focused specifically on low-income individuals, however the generalizations could be important for any type of workforce development program.

First, the programs studied all changed their readiness models (see diagram below):

FIGURE 1: TRADITIONAL CAREER DEVELOPMENT AND WORKFORCE READINESS MODEL

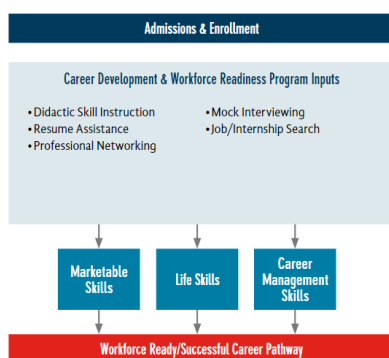
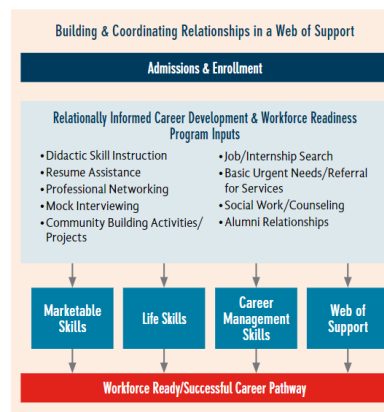


FIGURE 2: RELATIONALLY INFORMED CAREER DEVELOPMENT AND WORKFORCE READINESS PROGRAM



(p. 3).

While each of the programs served challenged populations, the findings illustrate a broad set of themes across all the diverse programs:

1. Relationships come first. In addition to the elements of traditional career development and workforce readiness programs—job skills, career management skills, and social and life skills that are important to navigating career pathways—all four programs place relationship-building at the forefront of their model.
2. Webs of support are integral to the program design. Adults in each program function as a web of support, offering different types of support to young people through multiple strategies and roles. Adults' interactions with program instead of putting a singular focus on the development of directly marketable skills.
3. Relationships endure and extend beyond the program. Each program fosters webs of support for their participants beyond the structured intervention so that each graduate has a system of relationships in place to help them stay on a path to adult success.
4. Relationship-building approaches differ depending on who the program serves. Each program takes a different approach to relationship-building, depending on the needs and strengths of the young people they serve." (p. 9-12)





## Scaling Workforce Development Programming in Baltimore

Baltimore has been successful in development a number of workforce development programs. This 2019 report “explores opportunities to scale up approaches to effective workforce development programming in Baltimore. [The] report is focused on expanding the quantity of services offered to reach more individual job seekers. Specifically, it considers the expansion of comprehensive models that address opportunity gaps through the provision of in-demand occupational skills training, industry-recognized certification, intensive employer engagement, and supportive services to mitigate personal and systemic barriers to employment.” (p. 2)

The report explored 19 different training programs ranging from individual participants costs between \$1,000 and \$12,000 annually.

The report identified three recommendations:

1. Increase private and public investments to grow what works.
2. Create and enhance tools and systems for greater effectiveness
3. Address major systems barriers to scale (p. 3)

One of the key learnings in the report are the barriers to scale. Public transportation was listed as significant barrier. Second is job readiness skills, particularly basic reading, writing, and math literacy. Finally, lack of a potential to earn a living wage is also cited. Individuals that want to engage in training programs need to be able to replace their existing low-skill/low-wage jobs while they train.

The study also cites a challenge that many cities face, coordination. The report noted that “there are a multitude of public and nonprofit stakeholders in Baltimore’s workforce development landscape...increased scale can best be achieved through greater collaboration. This would involve co-creation of career pathways that link programs in a continuum of skills development and stacked credentials.” (p. 22).

# Consolidated Research Report Findings

VIDA	WorkAdvance	STEM	Relationships Come First	Scaling Workforce
<p>“Using a rigorous research design, the study found that the VIDA program significantly increased the total number of college credits earned within a 24-month follow-up period. These effects are among the largest observed in rigorous studies of programs intended to increase low-income students’ enrollment and completion of post-secondary education. The program also increased rates of full-time college enrollment, enrollment more generally, and summer school enrollment. Finally, it increased the attainment of college credentials. Future reports will examine whether these effects translate into gains in employment and earnings”</p>	<p>“All providers translated the WorkAdvance model into a set of concrete services, but it took time — more than a year for some components and providers — and a substantial amount of technical assistance and support. As a result, at some sites, later study enrollees were more likely than earlier ones to experience a fully implemented and “mature” WorkAdvance program.” Overall, WorkAdvance resulted in large increases in participation in every category of services, as well as in training completion, credential acquisition, and employment in the targeted sector, compared with what would have happened in the absence of the program. Expenditures for the operation of WorkAdvance fell between \$5,200 and \$6,700 per participant at the four providers delivering the program.</p>	<ol style="list-style-type: none"> <li>1. How STEM is determined (work tasks, knowledge, skills, degree field). This results in a significant problem with how the acronym is used in labor market analyses.</li> <li>2. Many analysts overlook blue-collar occupations that require STEM knowledge, which results in (a) under-counting the number of STEM-related jobs, (b) inflating wage estimates (c) under-estimating the value of non-baccalaureate postsecondary education.</li> <li>3. When interpreting labor market data, policymakers and analysts should not make broad generalizations about STEM jobs or entire industries without carefully specifying the occupation (e.g., electrical engineering, front-line factory work) being discussed. to increase earnings among the long-term unemployed.”</li> </ol>	<ol style="list-style-type: none"> <li>1. Relationships come first. In addition to the elements of traditional career development and workforce readiness programs— job skills, career management skills, and social and life skills that are important to navigating career pathways—all four programs place relationship-building at the forefront of their model.</li> <li>2. Webs of support are integral to the program design. Adults in each program function as a web of support, offering different types of support to young people through multiple strategies and roles.</li> <li>3. Relationships endure and extend beyond the program. Each program fosters webs of support for their participants beyond the structured intervention so that each graduate has a system of relationships in place to help them stay on a path to adult success.</li> <li>4. Relationship-building approaches differ depending on who the program serves. Each program takes a different approach to relationship-building, depending on the needs and strengths of the young people they serve.” (p. 9-12)</li> </ol>	<p>One of the key learnings in the report are the barriers to scale. Public transportation was listed as significant barrier. Second is job readiness skills, particularly basic reading, writing, and math literacy. Finally, lack of a potential to earn a living wage is also cited. Individuals that want to engage in training programs need to be able to replace their existing low-skill/low-wage jobs while they train.</p> <p>The study also cites a challenge that many cities face, coordination. The report noted that “there are a multitude of public and nonprofit stakeholders in Baltimore’s workforce development landscape...increased scale can best be achieved through greater collaboration. This would involve co-creation of career pathways that link programs in a continuum of skills development and stacked credentials.” (p. 22).</p>

# Identified Workforce Development Themes

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Theme	Description
Alignment to market needs	One of the repeated themes is an alignment to market needs. Employer needs must drive any type of trade school or training initiative and that participation is a foundation for the success of any program. The reports illustrate that training opportunities should result in a direct-hire (or some kind of apprentice) option, having individuals either receive paid training or having the opportunity to move into a role immediately upon successful completion of a training program.
Job services, and support	There is a general theme of the need for services and support. Each research report noted the need to have a number of services that support the individual through the job training programs. The support could be in job readiness, preparation for the workforce, or other soft skills. Further, regional support such as public transportation was also cited. Some of this support could come in the form of required counseling sessions that are linked to the financial support learners receive.
Investment	There is a common theme that investment is necessary to launch and keep these programs viable. In some cases, employers are providing the necessary training and apprentice positions and are relying on the agencies support to identify candidates. In other models, there is substantial external support needed to pay tuition, counselors, job brokers, and administrative fees. There is a wide range of costs per participant, but the average across a number of programs is approximately \$7,500 per participant across an 18-24 month program for training costs.

**Connect industry workforce needs, support services, paid-training and development, and direct-hire opportunities**

# Airport Workforce Model Example

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## Port Jobs



The Port of Seattle (<https://www.portseattle.org/>) has created a program called Port Jobs and Airport University. The SEA-TAC airport has a number of programs that are interesting as they intersect many of the research report findings.

"The [Port of Seattle Commission](#) developed the "[Quality Jobs Initiative](#)" to improve wage equity and career development opportunities for the men and women who work at Sea-Tac Airport."

Airport University "helps Sea-Tac Airport employees build skills and advance their careers by offering college classes at the airport. Subjects include customer service, business technology, leadership, workplace safety and security, English as a second language, and others." Further, Airport University offers drop-in services such as career readiness, interview skills, and resume support.

Apprentice Opportunities Project (AOP) "supports unemployed or under-employed King County residents who want to pursue a living-wage career in the construction industry or other skilled trades. Services include individualized assessment and referrals, pre-apprenticeship training, assistance applying for apprenticeships, support to help ensure successful apprenticeship completion, and job placement assistance."

Further information can be found here:

- [Port of Seattle Workforce Development](#)
- [Airport University](#)
- [Career Support and Advancement Center](#)

# Economic Insights

## Manufacturing in Greater Cleveland

***A single coordinated umbrella organization is needed to bring together municipalities, county and state workforce agencies, employers, and training partners.***

The [2020 Ohio Manufacturing Report](#) identified a 57% skilled worker shortage as a factor limiting growth. It also identified that “Talent” was one of the top three priorities for 2020. The report noted: “[C]ompanies are being held back because they can’t get the right people, with the right skills, in the right jobs. In Northeast Ohio alone, there are approximately 8,000 open manufacturing jobs in the region today. With those numbers predicted to exceed ten thousand in the next few years, one thing is abundantly clear: Ohio cannot become a leader in advanced manufacturing unless we fix the talent gap. Manufacturers are deeply concerned about finding and hiring skilled workers. But change is hard: while 71% are improving their processes and 64% are improving their products, only 36% of companies say they are actively innovating the way they recruit and retain their people. To win the battle for talent, we have to fundamentally change the way we deal with people and build winning workplace cultures. The good news is that 76% of companies say they’re actively trying to do this.” (p. 3)

## The resources for collaboration are present in the Aerozone Alliance District

Services needed to effectively create a manufacturing recruitment, talent development, training, placement and retention pipeline are in place and operating. Within seven miles of the Aerozone Alliance District, two key educational providers (Cuyahoga Community College and Polaris Career Center) have a number of training programs that would be able to support manufacturing in Greater Cleveland. Further, there are a number of universities along with key employers such as Cleveland Hopkins Airport, NASA Glenn Research Center, and various manufacturers.



# Recommendations

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1

Adopt clear goals for any workforce development initiative and develop metrics as well as systems to track progress.

2

In the Aerozone District, identify one overall agency/entity to serve as the lead umbrella organization and create a space to connect service providers, potential employees & employer partners.

3

Connect the Aerozone Alliance's workforce development priority to the Aerozone Alliance strategic planning process and bridge to the Cleveland Hopkins Airport Master Plan.

# Recommendation 1

**Recommendation: Adopt clear goals for any workforce development initiative and develop metrics as well as systems to track progress.**

- Short-term strategies are difficult to implement because of the length of recruitment, eligibility, training program curriculum, and impact studies.
- Key stakeholders must be systematically engaged across a 3-5-year continuum to develop programs and monitor progress.
- Funding needs are deep, with significant initial start up funds are needed along with a clear plan for continued funding.

# Recommendation 2

**Recommendation: In the Aerozone District, identify one overall agency/entity to serve as the lead umbrella organization and create a space to connect service providers, potential employees & employer partners.**

- The Aerozone Alliance geographic area already has the foundation for effective and broad manufacturing workforce development.
- Services and facilities needed to effectively create a manufacturing recruitment, talent development, training, placement and retention pipeline are in place and in many cases available or operating.
- There are several agencies, as part of their current mission, that can create a local infrastructure to bolster services and connect job seekers with training.
- Available facilities exist in Brook Park, Ohio to serve as the central space to connect service providers, employers, and the workforce.

# Recommendation 3

**Recommendation: Connect the Aerozone Alliance’s workforce development priority to the Aerozone Alliance strategic planning process and bridge to the Cleveland Hopkins Airport Master Plan.**

- Develop an Aerozone Alliance priority goal and strategy statement related to workforce development, specifically with manufacturing employer and employee outcomes.
- Build relationships among key municipalities and align goals to both industry and resident workforce development and advancement.
- Build long-term outcomes that coordinate between Cleveland Hopkins Airport, the municipalities, the employers, and training providers.

# Job Broker Model

- A “Hub and Spoke” model is recommended with a central entity which identifies open positions and “brokers” the job opening and training for those jobs to individuals that include services and education.
  - Core components
    1. Competency Planning
      - A comprehensive regional strategy to identifying competency needs in the employment market and creating an implementation plan to fill specific workforce needs.
    2. Employer-Apprentice
      - A strategy that recruits workers to specific employers and/or training opportunities linking training needs with immediate employment.
    3. Comprehensive Support
      - A strategy that combines services (e.g., tuition support, living expenses, job opportunities), with critical needs such as childcare and utilizes “obligations and incentives” (VIDA) to empower individuals.
    4. Service Engagement
      - A strategy to partner with applicable service agencies as needed

# Job Broker Model Core Components

- Competency Planning: A comprehensive regional component to identifying competency needs in the employment market and creating an implementation plan to fill specific workforce needs.
- Employer- Apprentice: A component that recruits workers to specific employers and/or training opportunities linking training needs with immediate employment.
- Comprehensive Support: A component that combines services (e.g., tuition support, living expenses, job opportunities), with critical needs such as childcare and utilizes “obligations and incentives” (VIDA) to empower individuals.
- Physical Space: A component of any initiative should also include a physical location, located in the district, that can serve as a service point for candidates and employees, center for job brokers, and administrative offices.

## Provider (umbrella organization)

- Brokers open jobs
- Recruits candidates
- With employer, screens candidates
- Candidate services (counseling, etc.)

## Employer

- Job openings/positions
- Screens candidates
- Paid training/apprentice
- Permanent hire

## Training Provider

- Advisory
- Training and development
- Coordinate educational funds

# Next Steps

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## Immediate:

- Continue the Aerozone Alliance District strategic planning process and identify opportunities for linkages to workforce development.
- Collaborate with one to three employer partners and begin identifying to competency needs in the specific companies and create an implementation plan fill specific workforce needs.
  - Identify sector needs and current/projected competency needs.
  - Identify pathway partners that current develop competency-ready individuals.
  - Create direct pathways for individuals to employment through competency linkages.
- Engage the City of Brook Park, Ohio on the strategy to open a physical location to serve as a hub for the employer, candidates, and administrative services.

## Next 60-90 days:

- Identify a lead agency/entity to work with the employers and recruit workers to specific employers and/or training opportunities linking training needs with immediate employment.
  - Create paid-training opportunities to allow individuals to transition from current work to future work.
  - Develop a strategy that recruits workers to specific employers and/or training opportunities linking training needs with immediate employment.
  - Link training support to ongoing career development within the company.
  - Build support structure and services to enable individuals to overcome life challenges.

## Next 3-6 months:

- Identify open positions, through employer partners, and create a “direct-hire” approach to training and development of the candidates.
  - Candidates would be directly hired and while working, participate in additional upskill opportunities.
- Identify funding sources
  - Leverage existing state and federal grant opportunities for training support.
  - Identify/build apprentice models that allow candidates to move from their current job to new training/working opportunities.
  - Identify a sustainable pipeline of support through various long-term financial models.
- Outline services and outcomes (e.g., tuition support, living expenses, job opportunities), with critical needs such as childcare and utilizes “obligations and incentives” (VIDA) to empower individuals.
  - The agency would build in weekly, place-bound, support structure and services for individuals.
  - Create “obligations” to encourage a deep relationship to the program such as family engagement.
  - Build in critical service infrastructure needs to connect the paid training and development programs.



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