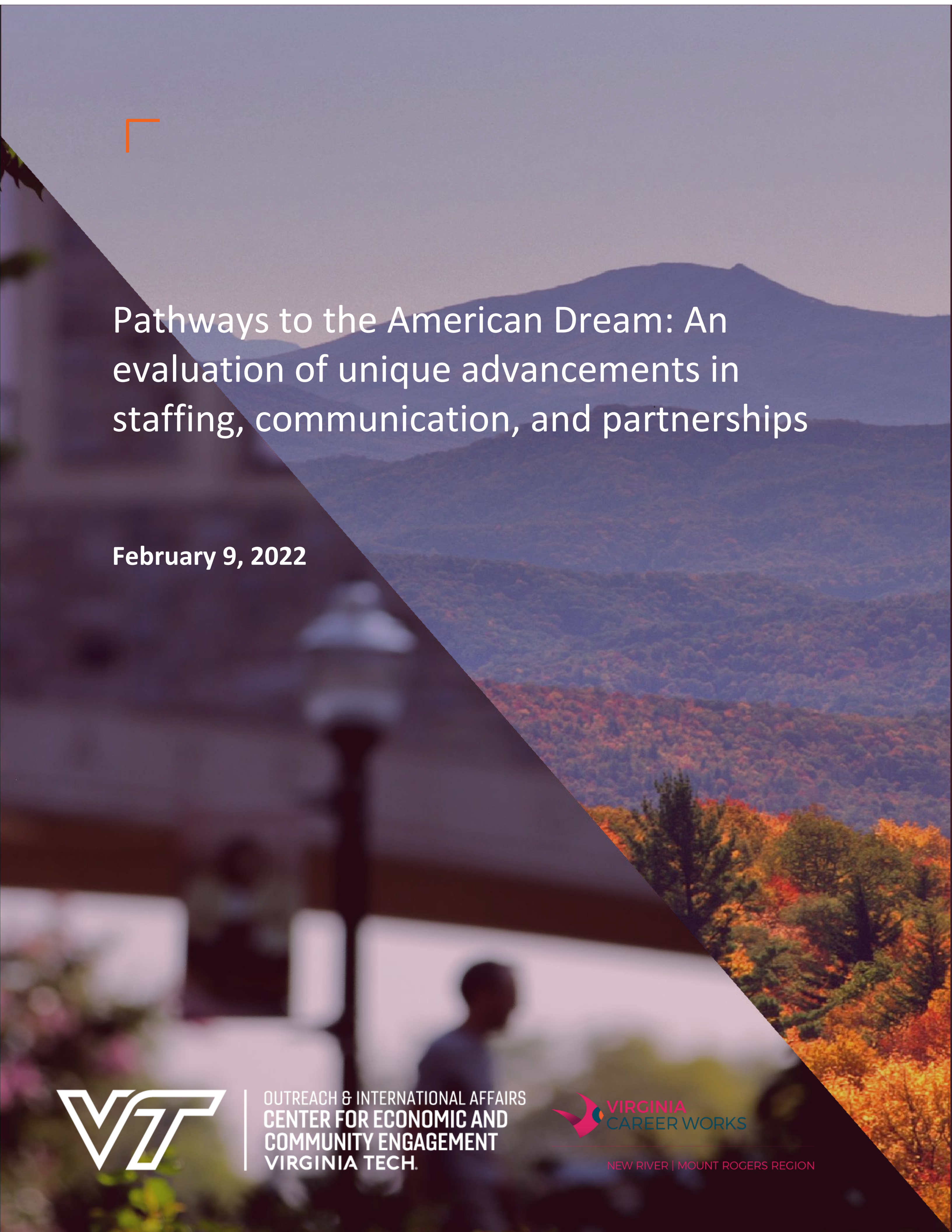

Pathways to the American Dream: An evaluation of unique advancements in staffing, communication, and partnerships

February 9, 2022

OUTREACH & INTERNATIONAL AFFAIRS
CENTER FOR ECONOMIC AND COMMUNITY ENGAGEMENT
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Acknowledgements

This report is the culmination of five years of work on behalf of Pathways staff, workforce board director, Outcomes Consulting Services, and the Center for Economic and Community Engagement at Virginia Tech. We would like to thank and acknowledge all of the partners and individuals who contributed their knowledge and expertise to this project.

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Pathways to the American Dream: White Paper

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Executive Summary

Through *Pathways to the American Dream (Pathways)*, the Regional Workforce Collaborative used unique communication, data, and staffing strategies to enhance communication and expand partnerships that increased regional job opportunities. As an innovative career pathways training program, *Pathways* built a skilled worker pipeline to help employers fill existing job openings and meet job needs for expansion. Additionally, *Pathways* enabled the region to capitalize on the development of more value-added industries.

The US Department of Labor (DOL) awarded The New River/Mount Rogers Workforce Development Board (NR/MR WDB) $6 million as part of their America's Promise initiative to enhance workforce development capacity through an education and training system that adapts quickly to the changing business needs. Through *Pathways to the American Dream (Pathways)*, the Regional Workforce Collaborative used unique communication, data, and staffing strategies to enhance communication and expand partnerships that increased regional job opportunities. The NR/MR WDB's project, *Pathways,* was a four-year project that covers four Workforce Areas: Southwest Virginia (LWIA 1), New River/Mount Rogers (LWIA 2), Western Virginia (LWIA 3), and West Piedmont (LWIA 17); and 33 jurisdictions in Planning Districts 1, 2, 3, 4, 5, and 12. The Pathways project focused on the creation a regional workforce strategy for sector partnerships in the Manufacturing, Healthcare, and Information Technology industries.

The project included a significant emphasis on evaluation and assessment. The evaluation plan developed and implemented for the project identified three key program elements as contributing significantly to project success:

- Staffing strategies
- Partnerships
- Communication

Staffing

Staffing was a conscious decision and a specific strategy (Table I)

Position	Description	Positive Impacts
Project Manager	Holistic overseer; provides teams and partners with needs-based information and tools; facilitates effectiveness and efficiency of project outcomes.	Fosters connections between program and WIOA Ensure sustainability Program improvement through data-driven continuous learning
Curriculum & Instructional Specialist (CIS)	Direct, close collaboration with BSS, Navigators, training providers and businesses to vet training, credentials and participants suitability to meet Pathways' criteria and fulfill workforce needs.	Manufacturing: majority of workplace-based upskilling and interventions. Healthcare: direct assistance to students on closing testing-gaps to achieve credentials. IT: introduction of training providers/community colleges to IT companies.
Business Service Specialist (BSS)	Needs assessments of regional businesses; connections to eligible employees, CIS, additional training assistance. Key conduit to regional business-serving partners.	Increase # of businesses served Increase scope of services Improving ability to improve processes. Improve understanding of business needs Capturing data on company progress
Workforce System Navigator	Connects candidates to training programs; guides participants from enrollment through certification and employment; close collaboration with community college instructors and training providers	Ensures enrolled participants achieve certification and employment goals. 95% of enrollees completed training, 95% of completers (1,249) became employed at an average wage of $49,000. This employment boosts household income $77 million annually.
Data Analyst	Aggregates various sources of quantitative data. Provides data entry and coordination, tracking outcomes, and managing evaluative data.	Enhanced the way that the above staff: • Target participants • Target businesses • Target training providers • Inform decision making and project improvement

Partnerships

Personal relationships built on mutual interest and trust were central themes across interviews with all project partners. Relationships were built based upon shared mission, objectives, goals, willingness to work together for a better community and region, trust, and it was critical to have open communication with those relationships:
Relationships with participant-serving partners that led to better student outcomes shared one or both of the following characteristics

1) they relied on in-person meetings with instructors
2) they are fostered through the provision of a broad range of support services that meet the student's specific needs.
3) caring personal relationships with participants (students)
4) Evolution from initial in-person "cold-call" visiting to frequent phone calls and emails. A result of this evolution was
    a. an increase in interaction frequency interaction between the Navigator and the partner
    b. recognition that the Navigator needed to be brought into the process earlier to enhance student outcomes.

As a whole, successful relationships with business-serving partners shared one of more of the following characteristics:

1) Identification of a primary point of contact at the WDB
2) Utilization of existing relationships and networks
3) Sharing of business engagement and outcomes across teams
4) BSS perceiving relationship building as a core aspect of business assistance

Some barriers to relationship building identified in the project include:

- Lack of transparency
- Staff turnover
- Competing cultures among organizations
- Historical conflict among organizations
- Difference in decision making processes between the public and private sector
- Different perceptions on the grant's relationship to the workforce system

The holistic services provided in the Pathways project by partners and integrated service teams were designed to fill gaps for the needs of participants, businesses, and partners. These gaps vary depending on the industry sector, but can be commonly categorized as information gaps, funding gaps, and training gaps.

Communication

We found that the benefits of effective communication are:

- trust building between Pathways team and businesses in the region, leading to a more open working environment
- broadening the footprint and reach of the project
- ensuring transparency

Introduction

The US Department of Labor (DOL) awarded The New River/Mount Rogers Workforce Development Board (NR/MR WDB) $6 million as part of their America's Promise initiative to enhance workforce development capacity through an education and training system that adapts quickly to the changing business needs. The NR/MR WDB's project, *Pathways,* was a four-year project that covers four Workforce Areas: Southwest Virginia (LWIA 1), New River/Mount Rogers (LWIA 2), Western Virginia (LWIA 3), and West Piedmont (LWIA 17); and 33 jurisdictions in Planning Districts 1, 2, 3, 4, 5, and 12. *Pathways* strove to decrease the reliance of skilled foreign workers under the H1-B visa program and leverage and align the Workforce Innovation and Opportunity Act (WIOA).

Pathways impacts the individual and family, business and industry, and the economy via the following theories of change:

- **Impact on the Individual and Family:** Low-skilled people with barriers will have opportunities to develop their skills, earn credentials, increase their earning potential, and prepare for and transition into employment in occupations with livable wages.
- **Impact on Business and Industry:** Employers will have access to skilled employees to remain competitive and grow.
- **Impact on the Economy:** Skilled workers will contribute to the economy and allow the region to capitalize on the development of more value-added industries.

The planned activities of the Regional Workforce Collaborative included:

1. **Goal One**: The creation a regional workforce strategy for sector partnerships in the Manufacturing, Healthcare, and Information Technology industries.
2. **Goal Two**: Increase opportunities for un- and underemployed adults as well as incumbent workers to develop their skills and earn credentials in high-demand occupations.
3. **Goal Three**: Guide education and training partners in closing the gap between the skills needed by workers and the skills of the available workforce, expanding the affordability of workforce training and credentialing, and increasing the interest in technician, technologist, and trade-level positions to fill available and emerging jobs.
4. **Goal Four**: Guide education and training partners in developing a system that awards academic credit applicable to the student's certificate or degree program requirements to students who demonstrate competency through a Prior Learning Assessment system.
5. **Goal Five**: Provide research and best practices so Virginia legislators can adopt policies for creating, sustaining, and scaling sector partnerships to generate innovative programming that closes skill gaps and leads to employment in technical and professional level demand occupations.

The purpose of this report is to share findings from a four-year participatory evaluation process, led by the Virginia Tech Center for Community and Economic Engagement (CECE) and Outcomes Consulting Services (OCS), primarily to meet the fifth goal: provide best practices on sector partnerships to close skill gaps and realize employment increases in in-demand occupations. The report begins with a regional economic overview describing employment and other economic trends in the healthcare, advanced manufacturing, and IT. We then describe the participatory methodology used to evaluate the ways in which Pathways contributed to sector partnerships, helped close skills gaps, and transformations in the regional workforce system. The results section is divided into four sections. In the first three, we describe innovative developments in partnerships, staffing, and communication and discuss their impacts from the perspective of sector partners. We conclude with a summary of recommendations for policy-makers, other workforce development organizations and their partners.

Regional Background: Population and job trends

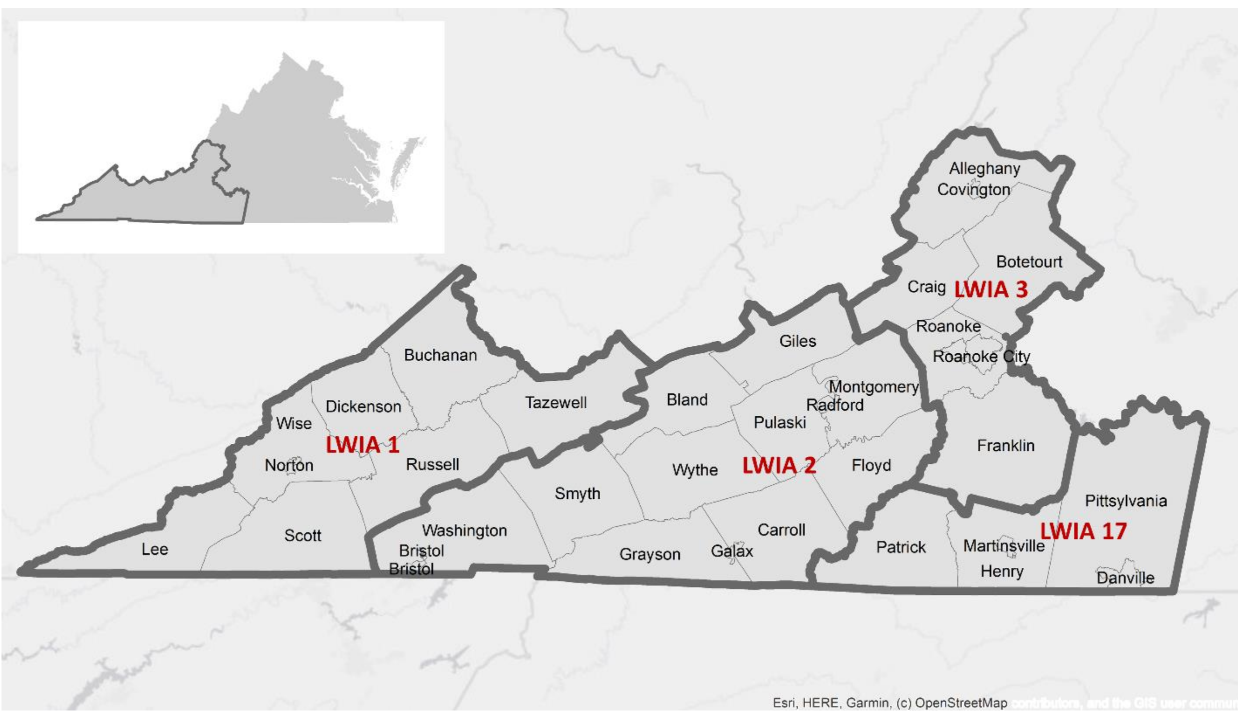

Figure 1 Pathways Region

The regional workforce system

Workforce Investment Boards (WIB) are regional entities created to implement the Workforce Innovation and Opportunity Act (WIOA). In Virginia, each local workforce development area designated in the Commonwealth establishes and maintains a Local Workforce Development Board (Local Board), which is certified every two years by the Governor.

The Local Board is part of a statewide workforce system which is business-driven, customer-centric, streamlined, and outcome-oriented. The Local Board carries out strategies and policies that support both the economic development missions for the local area and the Virginia Board of Workforce Development's (VBWD) goals. The Local Board sets policy for the local area, in compliance with broader state policy, and is the regional strategic convener, or acts in partnership with a designated regional convener, in addressing workforce development issues, including but not limited to WIOA activities.[1]

Population trends

Like many areas of rural America, the regional population declined slightly over the performance period, while Virginia and U.S. populations as a whole increased during that time. During the study period, the population in LWIA 1 declined by 3% and LWIA 17 experienced a 2% decline, whereas the populations in the other two areas remained stable. Figure 2 summarizes the population trends in the four regions over the performance period.

[1] Virginia Board of Workforce Development. *Membership, Responsibilities, and Certification of Local Workforce Development Boards*. Retrieved from: https://vcwnewrivermtrogers.com.

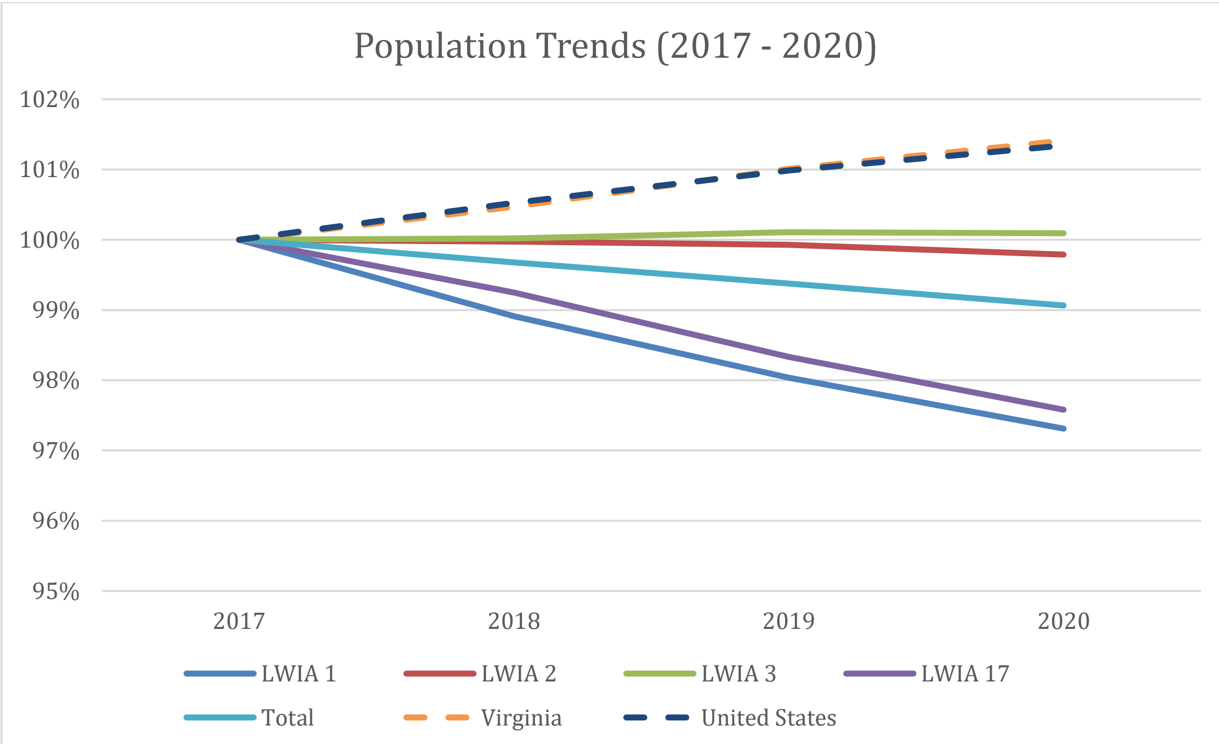

Figure 2 - Population Trends 2017 – 2020

Source: Emsi Q4 2021 Data Set

Job Trends by Industry

Pathways sought to increase skilled employment in three industries: manufacturing, healthcare, and IT. Overall, total regional jobs in these industries remained constant during the study period, however there was significant regional variation with some regions adding jobs and others losing them. To provide context for the key programmatic developments, this section describes the job trends in LWIA 1, 2, 3, and 17 by industry. [2] In addition to the base

[2]The job data discussed below includes the targeted jobs listed in the MOU converted to the 2018 Standard Occupational Classification (SOC) codes. Appendix A shows the full list of jobs included in this analysis.

year (2016) before the project began and the performance period (2017-2020), job trend in 2021 will also be discussed because it is difficult to separate the external economic impact of COVID-19 in 2020.

In each of these industries, the jobs story over the performance period before the pandemic hit in 2020 varies due to economic, regional, political, and institutional factors: LWIA 1 experienced a modest increase in jobs across each of the sectors; LWIA 2 and 3 saw manufacturing jobs decline, but healthcare and IT jobs increase; while LWIA 17 experienced the largest increase in manufacturing jobs of the four regions, but that was accompanied by a large drop in IT jobs. Due to the economic impact of COVID-19, targeted jobs in all four LWIAs decreased in 2020 in line with national trends. Total jobs in all three industries are gradually recovering in 2021, but healthcare jobs in LWIA 1 and LWIA 17 continued to decline in 2021.

Manufacturing

Changes in manufacturing jobs in the four regions vary, although the total number of jobs remained stable except for the decline in 2020. Until 2019, manufacturing jobs in LWIA 3 declined by 6%, followed by the 1% decline in LWIA 17 while the jobs in LWIA 1 and LWIA 2 have respectively increased by 4% and 2%. Overall manufacturing jobs at the State and national level have increased by 5% and 4% respectively, indicating that the region lags behind others. Job decreases between 2019 and 2020, which reflect the impact of COVID-19, were relatively slow at 2% in total when state and country levels fell 3% and 4%. Manufacturing jobs in the region recovered by about 1% in 2021 similar to the pace of the State and national level. Figure 3 shows the trends in manufacturing jobs in the four regions as compared to the

Commonwealth and the nation over the last six years including one year before and after the performance period.

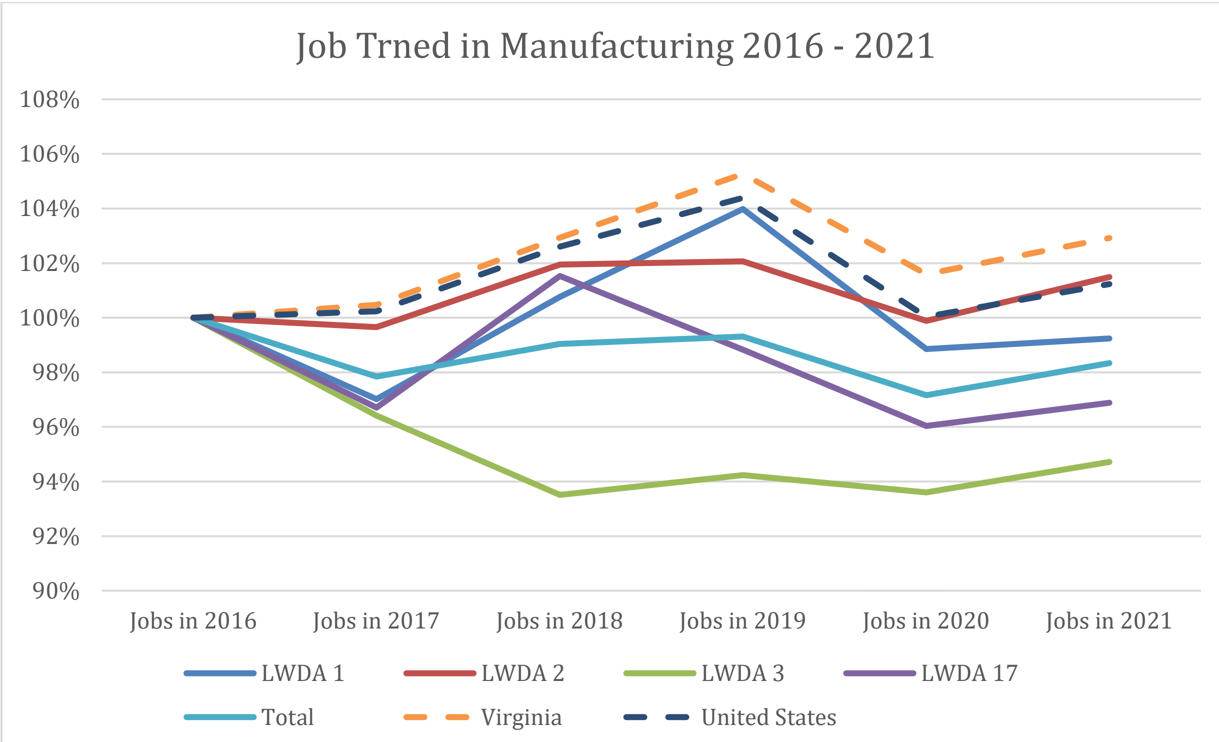

Figure 3 - Job Trend in Manufacturing 2016 – 2021

Source: Emsi Q4 2021 Data Set (Retrieved in November 2021)

Healthcare

Of the three industries, healthcare has the largest share of jobs. Until 2019, average regional healthcare jobs increased by 3% overall, however this skews interregional differences. While LWIA 2 leads with a 10% increase, healthcare jobs in LWIA 17 have decreased by 4%. After going through the impact of COVID-19 and recovery period, the total healthcare jobs in the region have declined by 1% between 2019 and 2021 similar to the national average. However, contrary to the national trend as well as LWIA 2 and LWIA 3, healthcare jobs in LWIA

1 and LWIA 17 continued to decline in 2021. Figure 4 shows the changes in healthcare jobs in the four regions as compared to Commonwealth and national averages.

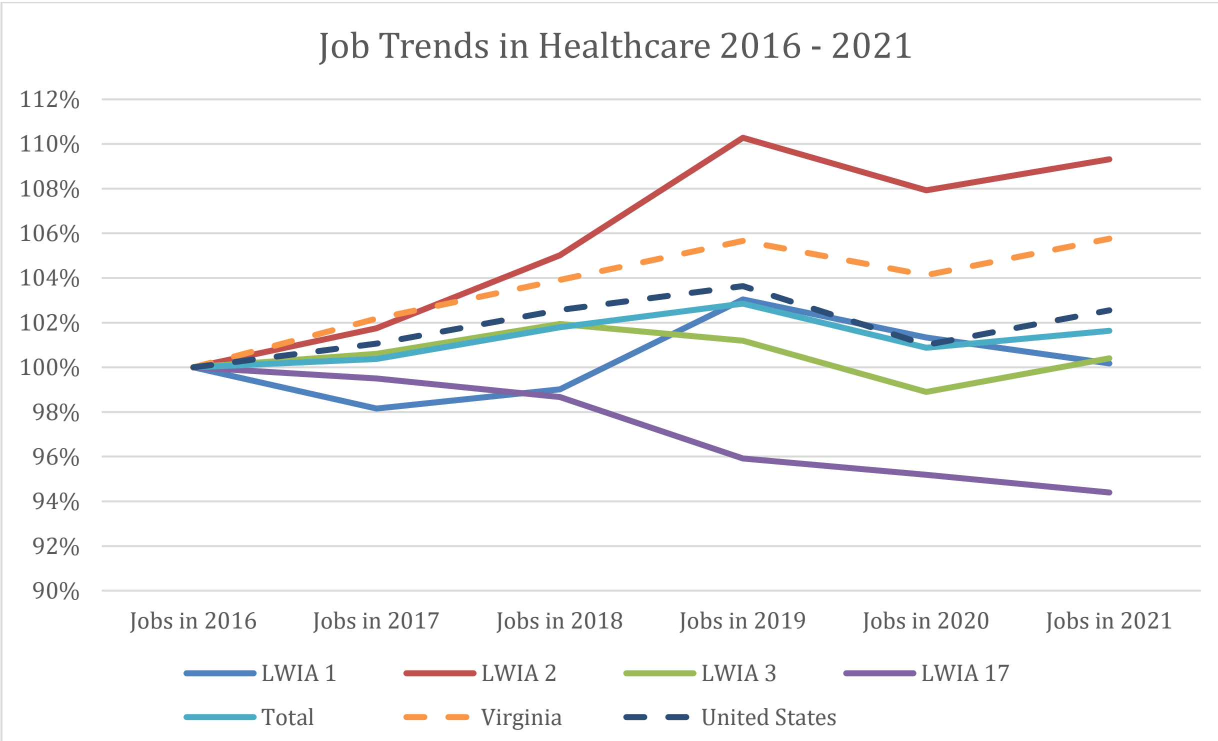

Figure 4 - Job Trends in Healthcare 2016 – 2021

Source: Emsi Q4 2021 Data Set (Retrieved in November 2021)

Information Technology

Figure 5 shows the changes in IT sector jobs in the four regions. Even though the total number of IT jobs in the regions stayed similar, each region has experienced a radical change in the jobs in this sector. Until 2019, IT jobs in LWIA 17 have declined by 33% and LWIA 1's has declined 3%. Meanwhile, LWIA 2's IT jobs have stayed the same and LWIA 3's increased by 6%. Total IT jobs have declined during the pandemic and recovered to the similar levels in 2021, while state and national averages have increased by 3% and 2% over the same period.

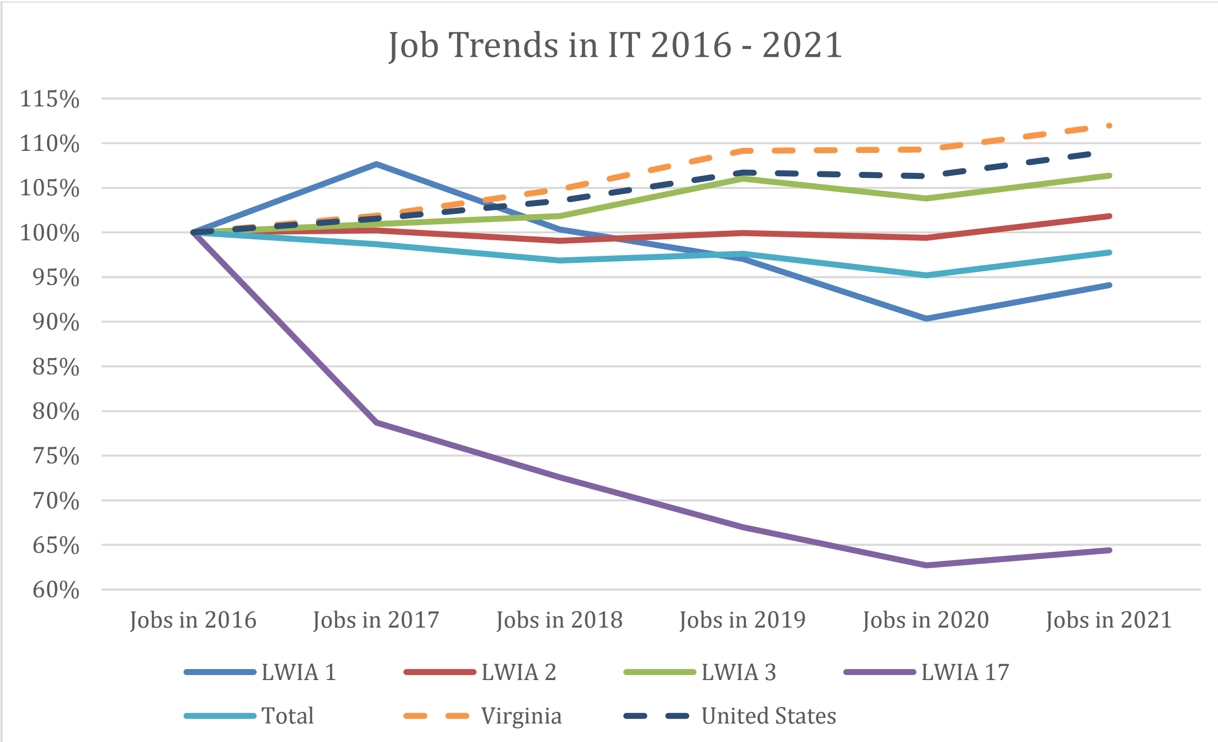

Figure 5 - Job Trends in IT 2016 – 2021

Source: Emsi Q4 2021 Data Set (Retrieved in November 2021)

Having introduced the context, we now turn to the purpose of this evaluation and the methods used.

Evaluation Methods

The primary goal of this participatory evaluation effort was to provide research and best-practices so Virginia legislators and policy makers can identify, develop, recommend, and adopt policies for creating, sustaining, and scaling sector partnerships. These partnerships in turn generate innovative programming that closes skill gaps and leads to employment in high wage technical and professional level in-demand occupations. The team chose a participatory evaluation capacity building (ECB) approach for two main reasons. First, an external evaluator was already engaged by the DOL to review project progress against aggregate program goals. Second, the Pathways staff was extremely motivated to understand how the program was working in real time.

The knowledge gained from the external evaluators' technical approach was useful for project accountability as well as aggregation with other projects to answer the question: does the Pathways to the American Dream project lead to a decreased reliance on skilled workers on H1B visas? While this approach gathered instrumental knowledge of project process (answering "*what happened?")*, as well as experimental knowledge of the average effect of the program on common metrics such as wages (answering "*how much*"), the participatory approach garnered relational, contextual, and transformational knowledge[3]. This type of knowledge matched the purpose of this evaluation: identifying and reflecting on *"how"* and "*why"* specific program elements become best practices and affected change. The highly engaged Pathways staff believed answers to these "*how"* and "*why"* questions would help them serve their participants and partners better, be more effective communicators, and implement the most impactful program. Building the teams' capacity to critically analyze, reflect, learn, and share their work was critical to this participatory process.

The findings included in this report represent the data, reflections, and knowledge built collectively among the evaluation team, program staff, and project partners with a goal of understanding how, why, and to what extent this program changed our regional workforce system vis-à-vis sector partnerships. In the first year (Phase One), the project contracted with

[3] (Choiunard, 2013).

Outcomes Consulting Services (OCS), who met with the program management team to devise a way to think holistically about the program activities and their impacts. During this first year the project staff received training in project evaluation process and concepts and began to develop a framework for conducting the evaluation. In year two (Phase Two), the project engaged CECE to both conduct additional whitepaper research, and enhance evaluation capacity among staff. During that second phase, the team employed Cornell's Systems Evaluation Protocol (SEP) to analyze stakeholder involvement, develop program theory and identify possible intended and unintended outcomes. This phase included monthly facilitated training sessions with staff, individual staff interviews with LWIA 2 staff, and interviews with contracted partners. Phase Two culminated in an evaluation plan based around three key program elements identified as contributing significantly to project success: partnerships, staffing, and communication.

The evaluation plan included a series of evaluation questions and sub-questions for each unique program element, data collection and analysis tools including interviews, focus groups, document, and a database analysis framework. See the appendix for a full list of questions and corresponding data collection tools.

Table 1: Evaluation Questions

Key Element	Sample Evaluation Questions
Partnerships	With whom did we build key relationships? How were those relationships built? How did those relationships change over time? How did holistic services provided in IRTs serve participants differently?
Staffing	How did the Curriculum and Instructional Specialist determine business needs? What is the added benefit of having Business Engagement Specialists function within Business Service Teams? What types of data did the Analyst produce? What are the key elements of a higher performing team?

Key Element	Sample Evaluation Questions
	Why does listening to the needs of businesses over job placement result in better outcomes, and for whom?
Communications	How did partners use data to drive key decisions? How frequently did partners use the portals and other communication tools? What communications tools were dropped part-way through the project and why?

During the third and final phase, the team gathered additional data from a range of participants. Number and types are shown in table 2:

Table 2: Participant Data Collection Method

Participant type	Data collection method	Number
Program Staff	Focus groups	4
Navigators and business service specialists in LWIA 1,3,17	Individual interviews	6
Business serving partners (state or regional economic/industrial development organizations)	Individual interviews	5
Participant serving partners (community colleges and training program providers)	Individual Interviews	6

All interviews were recorded, transcribed and divided into “meaning units”. Each unit was coded according to the key evaluation question and sub-question. Then, a second round of coding identified emerging themes. Each interview was coded by two separate researchers, and points of disagreement were reviewed and negotiated. In many cases, meaning units provided insight into multiple areas of interest – for example, data sharing that strengthened partnerships would be coded as both “partnerships” and also “communication”. The evaluation team coded additional program documentation, including annual and quarterly reports as well as used administrative data like participant enrollment and outcomes, and longitudinal data collected by the Curriculum and Instructional Specialist (CIS) on business engagement to triangulate the interview and focus group findings.

The following three sections summarize the findings from this administrative data, interviews, documents, observations, and reflections for each key strategy area, with illustrative quotes included. Note that to retain anonymity and increase readability, we identify individuals according to their position (i.e. Business Service Specialist 1, Participant-serving partner 3).

Staffing

Table 3: Staffing Strategies and Impacts

Position	Description	Positive Impacts
Curriculum & Instructional Specialist (CIS)	Direct, close collaboration with BSS, Navigators, training providers and businesses to vet training, credentials and participants suitability to meet Pathways' criteria and fulfill workforce needs.	Manufacturing: majority of workplace-based upskilling and interventions. Healthcare: direct assistance to students on closing testing-gaps to achieve credentials. IT: introduction of training providers/community colleges to IT companies.
Workforce System Navigator	Connects candidates to training programs; guides participants from enrollment through certification and employment; close collaboration with community college instructors and training providers	Ensures enrolled participants achieve certification and employment goals. 95% of enrollees completed training, 95% of completers (1,249) became employed at an average wage of $49,000. This employment boosts household income $77 million annually.

Staffing Structure and Responsibilities

Staffing was a conscious decision and a specific strategy for the Pathways to American Dream Project. Below we briefly describe different team members' roles and their responsibilities:

- **The Project Manager** oversees the process holistically, communicates with different teams and provides them information and tools based on their needs to facilitate the effectiveness and efficiency of project outcomes. Further communication strategy details are included the report's communications section.
- **The Curriculum and Instructional Specialist (CIS)** works directly and closely with Business Service Specialists, Navigators, training providers and businesses to vet training, credentials and participants suitability to meet Pathways' criteria and fulfill workforce needs.
- **The Business Services Specialist (BSS)** works with businesses throughout the region (each region has one BSS) in order to understand their workforce and training needs. In collaboration with navigators, the BSS connect businesses to eligible employees and with CIS assistance, business service specialists introduce suitable training programs to employers. In interviews, sometimes referred to as the Business Solutions Coordinator
- **The Workforce System Navigator (Navigator)** is responsible for connecting candidates to training programs and to guide the trained workers to pertinent employers through Business Services Coordinators. Navigators conduct the candidate pre-screening candidates before sending them to the CIS. Once in the program, navigators work

closely (meeting with the enrollees at least once a month) with participants and training providers to understand and assist with their needs and challenges.

- **The Data Analyst** supports the whole process and team members by creating quantitative reports based on the data he receives from various groups. The analyst is responsible for providing data entry and coordination, tracking outcomes, and managing evaluative data.

Curriculum and Instructional Specialist

The Pathways Curriculum and Instructional Specialist (CIS) thoroughly vets training, credentials, and participant suitability to meet the businesses' needs. The CIS interacts with multiple project stakeholders including applicants, students, training providers, businesses and others on the Pathways project team. In short, by providing research into training, credentials and career pathways, the CIS has a vital role in (re)aligning existing programs with workforce training needs.

When it comes to potential applicants, the CIS conducts the referred candidates' screening process to select those who can benefit most from the program. For those who are already in the program, the CIS tries to optimize the program to fulfill participants' training needs. The Navigators inform the CIS about potential challenges that students have in training programs and the CIS assesses the training process to help ameliorate the content/strategies or techniques. For instance, the CIS explained that by observing a course on jewelry making, she noticed that students needed to follow the instructor's hand movements, however they frequently missed the steps since by facing the instructors, students couldn't exactly imitate the process. By recommending the addition of some visual enhancement tools, they could solve the problem.

Interaction with Training Providers

From the training perspective, the CIS evaluates training programs to see if they meet Pathways' criteria to ensure funding through the Pathways grant. For example, the programs need to offer credentials upon graduation in order to be considered eligible for Pathways funding.

Interaction with Businesses and Employers

The CIS assists businesses in several ways:

1) The CIS is responsible for working with employers to make sure that training has all the required components to fulfill business needs. According to one BSS, this close collaboration has resulted in customized training solution design and development; "*that's what's lovely about our project - if a training program doesn't exist, we can help them develop something that will work".*
2) By auditing positions at a business and identifying the skills needed for a certain job, the CIS contributes to better hiring and training processes.
3) Lastly, through research, the CIS identifies those accredited programs that are more effective to meet businesses' needs.

Interaction with Pathways Team

The CIS frequently interacts with other staff on the project team.

1) Working with the data analyst, the CIS creates monthly Business Engagement Data Reports for business service specialists to help them with informed decision making.
2) The CIS also helps Navigators by going through the processes (e.g., filling the applications, passing tests, paying fees) and finding negative feedback loops, information gaps and challenges to facilitate applicants' transition from graduation to employment.
3) The CIS identifies business needs through collaboration with one or more BSS.

In short, by providing research into training, credentials and career pathways, the CIS has a vital role in (re)aligning existing programs with workforce training needs. Many shorter-term, "fast track" training programs do not align with the criteria for Pathways' project, as they are often entry level programs or there is not an industry recognized credential. While many businesses have specific criteria when looking for employees' knowledge-based qualifications, the training provider programs do not always align with the businesses' needs. In these cases, the CIS will visit businesses and take a tour, review the job description with the company, then (re)search for suitable training providers, or at times customize training programs.

Process Spotlight: Determining Business Needs

The CIS identifies business needs through collaboration with a BSS or via her direct interaction and personal observation. There are multiple entry points when it comes to understanding business needs.

1) In some cases, the BSS reaches out directly to businesses to gauge their training/workforce needs.

2) In some localities, businesses interact with workforce boards or others in the ecosystem regarding their training/workforce needs and the connection with BSS occurs through those agencies.

Through collaboration with CIS, proper training programs and credentials are identified. The CIS and BSS communicate frequently with businesses to make sure their needs are met and employees are effectively receiving the required training and credentials. In case the employers have certain training programs/credentials in mind, the BSS shares the information with the CIS to vet the curriculum to ensure that it fits Pathways criteria and can assist employers/employees achieve their training goals. It is worth noting that the collaboration between the CIS and BSSs varies across regions. A BSS 4 in one locality viewed the CIS as a

> "wealth of knowledge, resources, feedback, who always helps [him] in the right direction"

However, BSS 3, operating in a different service region, and focusing on IT noted that:

> "My work with [the CIS] is not in-depth. [She] has done more work to other folks. I send reports to her. I have talked in passing with her. We have had some trouble with the IT space so I reached out and asked her what approved curriculums she has that we can plug into. PMP certification, scrum master certification."

The CIS, through research, outlines different occupations and matches them up with training providers. When it comes to a specific occupation, the CIS knows how to find the best fit based on credentials. Since not all training programs are specific about their expected outcomes, it is necessary that CIS makes sure employees and employers require training outcomes that align with the selected provider's promises and deliverables.

Lastly, the CIS conducts audits for higher turnover positions in order to help businesses have a better understanding of what that position entails (i.e., more precise job description and hiring process), to identify what skills might be needed and what training programs are available.

Analysis of Engagement by Industry

Manufacturing Industry Engagement with CIS

Most CIS interventions occurred in the manufacturing area although the process differed vastly across individual companies. The percentage of manufacturing companies that engaged with the NR/MR WDB over the course of this project increased from 28% to 41%, compared to 24% to 25% for the IT sector and 12% to 15% for the health care sector. (see figures 6 and 7)

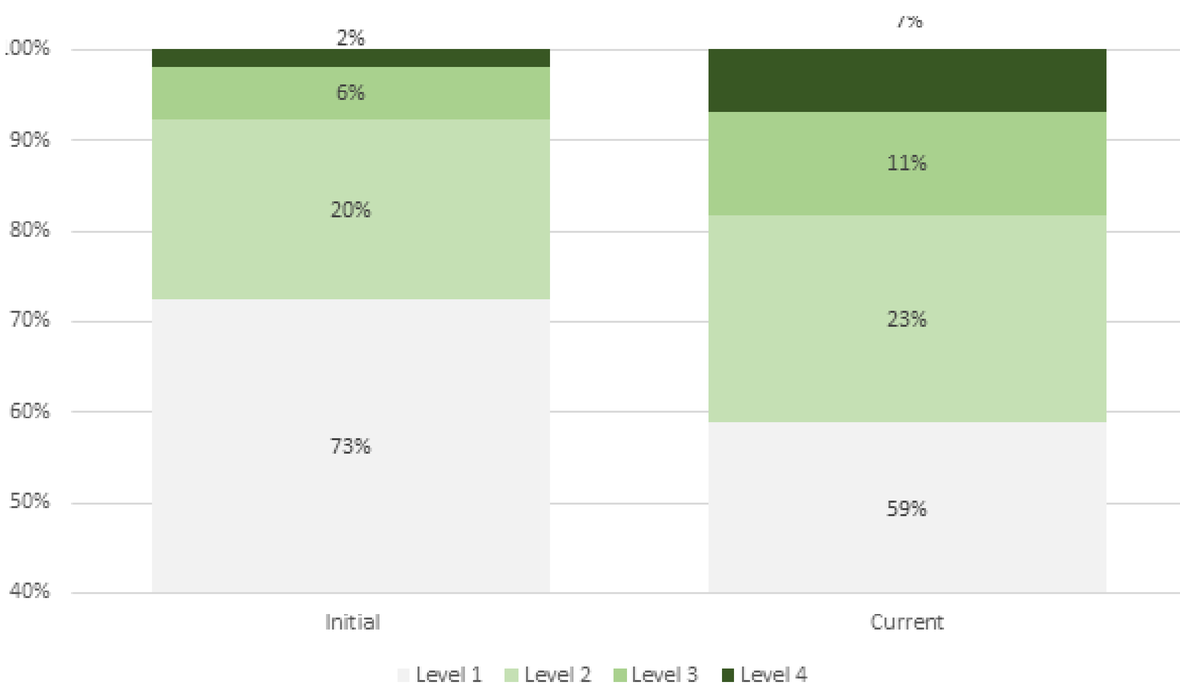

Figure 6 - Change in Engagement for MFG Sector

The CIS affects the manufacturing industry in the following ways:

- Observation to identify needs

- Facilitate training
- Identify applicable industry certifications
- Contribute to more efficient training solutions

In some cases, the CIS first observed a company’s activities before identifying a need and finding training for incumbent or potential workers to attend. For example, a business in Area 2 was finding it challenging to find welders who have experience working with aluminum, more specifically the 6G process. The company was interested in doing an in-house pilot intensive training program in which new employees spend 80 hours in training with the company's master welder and quality engineers to help newcomers understand the process and pass the ISO requirement. The CIS worked with the manufacturing company to help them see how the Pathways funding could be used to enhance this training and develop a career pipeline for their aluminum welders.

Sometimes a company is very clear about what certification they want or need, which simplifies CIS’s role to facilitating the initial training and costs associated. For example, an advanced manufacturing company was interested in starting a continuous improvement group. The CIS helped them find suitable training programs to send employees through green belt and black belt certificates.

> “This process saved money and time and helped the company to be more effective”.

The CIS also helped companies find applicable industry certifications. Employers use credentials as a basis for recruiting, hiring, placement and promotion. One example is the

National Incident Management System (NIMS) certification[45]. In addition to being a benefit to employers, the certificate provides job seekers with a competitive edge while job hunting along with a promotion or raise for incumbent workers. Plus, individuals can amass national, industry-recognized skills while completing apprenticeships or other formalized training programs. Lastly, schools, education centers and colleges use NIMS skills standards to align curriculum to industry practices and rely on NIMS credentials as an industry-recognized validation of student comprehension and instructional quality. The CIS helps both industry and job seekers by informing them about the required NIMS levels for different occupations and ensuring alignment with existing programs, where possible.

The CIS also contributes to efficient training processes. For example, when one business needed EDL - ISO certification (ISO 17025 2017) plus an OSHA standard, the CIS could find a training provider who offered both to fulfill the employer's needs more efficiently.

Healthcare Industry Engagement with the CIS

In healthcare, credentials and the provider institutions are well-established, therefore there is less need for CIS intervention for vetting programs/training providers. This is one reason for the smaller levels of engagement with employers in this sector (Figure Y). However, the CIS did have strong engagement with healthcare industry participants. By providing extra

[5] NIMS provides a consistent nationwide framework and approach to enable different sectors to work together to prepare for, prevent, respond to, recover from, and mitigate the effects of incidents regardless of the incident's cause, size, location or complexity. NIMS credentials impact the success of individuals, employers, and educational training programs in a couple of ways: A NIMS credential demonstrates that the credential holder met the industry benchmark for that occupational competency.

mentoring and coaching of individual participants, specifically certification exam assistance, the CIS increased completion rates and employment outcomes.

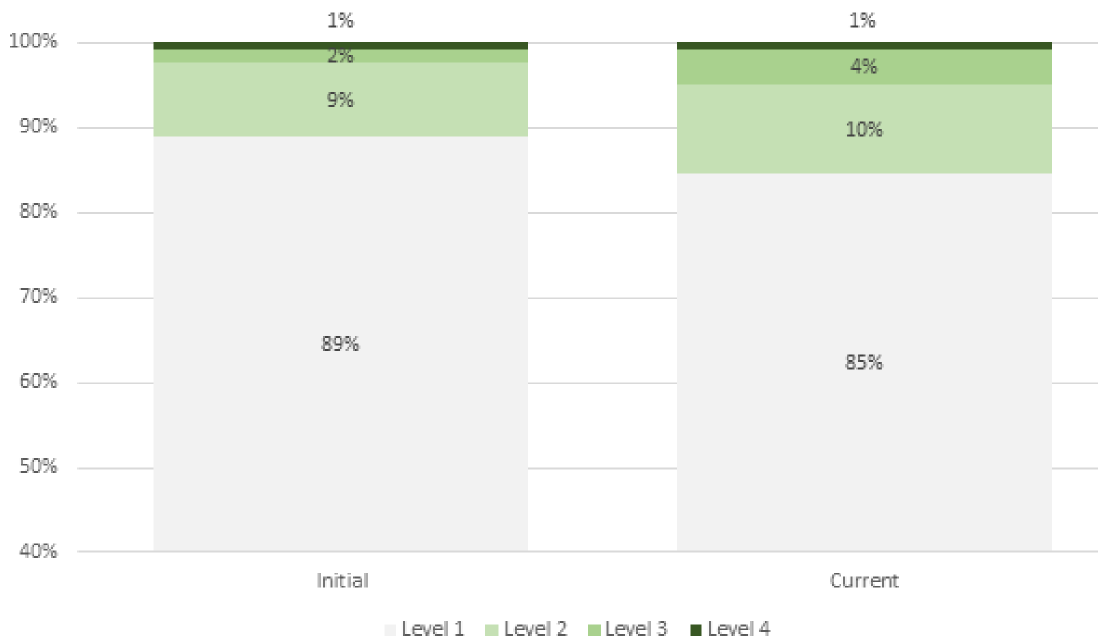

Figure 7 - Change in Engagement for Healthcare Sector

In terms of engaging with the healthcare employers, one BSS explained:

> "With healthcare, they know exactly what they need. They have good ideas of how to get there. We haven't been as interactive with training, helping people get into training because our larger healthcare companies have their own internal training programs, and they have tuition reimbursement or assistance programs and can send their own folks. We will happily pay them back or pay for their tuition….our big ones in the region, [...], have long term relationships with training programs, know how to connect with those individuals.

The types of interventions seen in this sector include helping students focus on areas needing remediation or similar help. Often, the CIS contributes by helping students who fail their exam for the first time to figure out where they need to focus efforts on. She meets students individually and talks to them about test taking experience and checks to see if they struggle with test anxiety or other issues. Based on the information she gets during her one-on-one, she provides each student an individualized retesting plan (e.g., day by day or week by week).

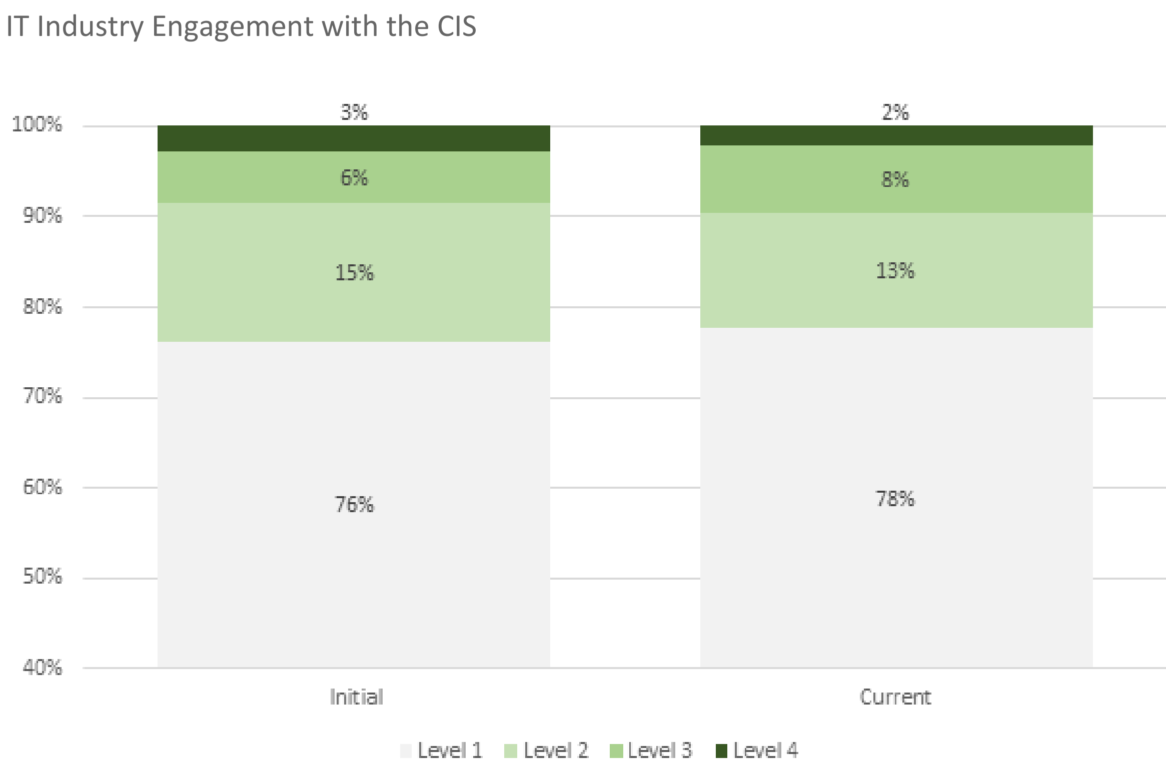

Figure 8 - Change in Engagement for IT Sector

Perception among Pathways staff, participant-serving, and business-serving partners is that IT companies are usually aware of, and specific about their exact training and credential needs. Therefore, Pathways primarily helped IT workforce training by introducing training providers that can fulfill the educational/credential needs to businesses. The CIS also makes sure training content aligns with the general credentialing requirements, making it relevant to additional regional companies. One barrier here is that not all in-demand training programs culminate in a credential, making them ineligible for Pathways funding. For these reasons, the Pathways contribution to the workforce in the IT was mostly through providing financial assistance in the form of tuition and fees. BSS 1 told us that:

> [A company] in Abington; the CIS helped them train three of their employees on a specific software because they had a [potential] customer who needed [help desk] assistance. In order to get that contract, [the IT company] had to send people through [additional] training. That created a new line of business for them.

Or as another BSS noted:

> [Pathways team] works with a fairly large IT company that needed all their folks trained in these programming languages. So [the CIS] made the connection with community college to make sure training met needs and then paid for the training.

In one focus group, interviewees mentioned that sometimes the training content does not align with the credentials. Especially in the case of IT training programs, the CIS needs to make sure the content aligns with the credentials/tests. According to Navigator 2:

> [In the IT industry, Pathways] supported a couple of students for 2-year programs. Businesses want more 4-year degrees. It's so specialized, certificate and associate program. They [job seekers] weren't getting credentials and certifications to work a helpdesk job. Pass rates are very low for certain credentials. That's a program that local training providers try to revamp to meet the needs. [The CIS is] working with [educational partners] to customize their training because major IT employers are recruiting from out of the area in order to fill their positions.

However, during our focus groups, the Pathways team came to realize that their initial assumptions about the number of IT companies in the region and IT job opportunities for applicants without a bachelor's degree or above were not accurate. Business Serving Partner 5 claimed that out-of-region IT companies fill their entry level jobs by recruiting VT students as interns and "as soon as that intern graduates, a lot of them want to leave the area." Business serving Partner 6 highlighted the difference between manufacturing and IT jobs by claiming that manufacturing has higher turnover rates due to competition in the area, whereas IT companies are mostly recruiting specialists with specific high-level skills. One BSS concluded,

> "For IT, it is difficult because credentialing is not as important as in the other fields. There are opportunities for training that don't end up with credentialing which is a requirement for Pathways."

The CIS played an important role in the success of the program through their interactions with fellow staff, participants, businesses, and partners. Their approach, engagement, and outcomes differed by industry sector, and also by region. The success of the CIS should be viewed in relationship with the work of the other staff.

Navigators

Navigators work directly with several types of program participants. First, they assure eligibility and suitability of participants, and assess their barriers to education and training. They also assess their short- and long-term goals, required wage rate for self-sufficiency and mobility and levels of commitment to those goals. Next, they work with participants who are ready to begin a certificate or degree program in an eligible career pathway. Finally, they provide supportive services to reduce barriers to employment including tutoring, mentoring, tuition assistance, hands-on assistance with forms, and general counseling and advising support. These relationship based support services were one of the key difference makers for students, especially in the healthcare field. A community college instructor explains the benefits:

> Participant-serving partner 3: [Students don't apply] because either students don't think that they will qualify [or if] it's a lengthy application, they just don't have time. [They assume] it's a cumbersome process, they just don't feel like they have the time to do it. So many of the scholarships go unused. [...] [Pathways] was completely different [...] because the Navigator actually comes in person and explains it to them. And not only that, she tells them what to bring, what they need to have, and how they would qualify… [She explained] how and what exactly [the money] can help them with. [...] She walks them through the process of applying, and to my knowledge no one has ever done that for students to walk them through that.

One participant-serving partner described the process as both structured and also informal:

> Participant-serving partner 2: The Navigator started the relationship with [students], [she said to students] this is what the grant does, and this is what we're supposed to do. And [she] gave examples of how they could help. [...] When it came time [...] to look at the student's financial aid, the Navigator was able to determine if there was a gap. The students primarily would talk with her about that, if they had an issue. [...] there wasn't a formal process. We just kind of did it organically.

One result of this hands-on personal approach can be seen in the way the relationship was perceived by students and Navigators. One Navigator described themselves as a cheerleader or mom in their relationships with participants:

> Navigator 2: They like the fact that we are there with them. A lot of participants need support - we are their number one cheerleader and advocate. Until you get your job, consider me your 2nd and 3rd mom - I'm here to help you get through.

These caring relationships not only support participants to get through the process, but also help them to identify and fill monetary needs. For example, one Navigator said that she asks students to inform her about their needs regarding fees and tests, so that she can help:

> Navigator 1: Especially with healthcare, so many fees, tests, and etc. [are needed]. At the end of graduation, to be licensed is difficult. [We] let her know the situation, program that she was in, [...] and who to talk to. [We ask her] call us and let us know what we need to do to get the participant in the books.

Business Service Specialists

Each workforce area employed one Business Service Specialist (BSS), or business service coordinator, for a total of four BSSs operating at any one time. The BSS is tasked with reaching out to employers and businesses to understand workforce needs and challenges. Each BSS is a member of a Business Service Unit/Business Solutions Team (BST) which consists of multiple partners such as the Virginia Employment Commission (VEC), People Inc., the veterans' coordinator, Chambers of Commerce, and economic developers. Depending on the region, this group meets bi-weekly or monthly to discuss the region's business needs. Through hosting joint job fairs, connecting eligible employees to employers, and facilitating on-the-job and incumbent worker training, the BSTs helps coordinate workforce activity with greater efficiency. See the Partnerships section for more discussion on the BST. The BSS position experienced some significant turnover in two of the regions, contributing to differential regional impacts. This is due to the length of time needed for a BSS to build trust, seen by staff as essential precursor of an effective and efficient working relationship. Overall, the BSSs contributed to the following project outcomes and impacts:

- Increasing the number of businesses served
- Increasing the scope of services
- Improving the ability to change processes in a positive way
- Improving the ability to listen and understand business needs
- Capturing and sharing anecdotal or sensitive data not otherwise captured in existing data management systems.

Business Service Specialist Core Activities

Operationally, BSSs adapt their work to suit the needs of their regional businesses. Sometimes businesses reach out to BSSs with questions regarding their workforce recruitment and training. In these cases, the BSS will conduct a business need assessment to understand the exact needs and to find optimum solutions to respond to businesses. The business needs assessment process is usually through a semi-structured interview after a business tour. BSSs provide data to businesses or invite them to participate in a partner conversation about how to better serve their customers. Training needs differ based on industries, for example, healthcare fields require credentials whereas manufacturing occupations are more concerned with shorter term incumbent training. The BSS identifies potential training providers based on his/her business assessment and in collaboration with the CIS, the Pathways team find program(s) that aligns most closely with businesses and workers' needs.

According to BSS 1, having a person in this position has allowed Pathways to increase the number of businesses and also the scope of their service.

BSS 1: [The program has] provided services for companies more than ever before - not just more companies, but the level of work with the companies - we are able to do more things.

In one focus group, team members said the BSS position has changed the process and dynamics of Pathways in a positive way.

Staff: [Although] each workforce area would have seen it shift a little differently by their own dynamics, and their own localities, in their own region, but I think all four from having that opportunity [of having their own dedicated BSS], have seen a dramatic uptick. Partner engagement in serving businesses, recognition from the effort of serving businesses, but certainly the number of businesses you can actually touch in reality, and certainly has shifted. And we should be able to see that with data.

Business Solutions Teams

Business Solutions Teams (BSTs) provide benefits to workforce partners throughout the region:

Business Serving Partner 6: I love working with [BSTs]. In general, participating in that is listening to business issues, business concerns. I'm working with multiple partners on the Business Services team to make sure those are addressed. [A BSS] and I will go out and meet with the business to discuss their needs and a lot of things I can't do; I refer to her so she can sometimes fill those gaps that I can't. I have also participated in community college job fairs that she has arranged. When we present to a business that is potentially expanding, we will mention Workforce Development Board services even if [a BSS] is not present.

Anecdotal data on business needs and progress is important for a BSS to capture, and the primary way business-serving partners share it is through BST discussions:

Anecdotal data is not put into a system. It only can be shared during one-on-one meetings with employers, face to face, networking meetings. BSSs and businesses share that during partner meetings and business services meetings.

In our interviews, BSSs highlighted the importance of listening closely to businesses and understanding their exact needs and anticipation for employers, employees and training providers. BSS 1 explained:

BSS 1: "Lots of times I've talked to somebody or they've reached out and they have this particular need, they've had open positions that they're not able to fill, or they've got folks that are retiring, and they're often on the edge of panic because they don't know how they're going to get the people trained in whatever time frame to be able to continue operations seamlessly. So, I'll take as many minutes as I can about what the need is, and timelines and

> what they anticipate what they would like to see happen, which maybe doesn't always meet reality".

BSS 2 mentioned listening to business self-identified needs not only helps the BSS address those needs but also to connect them to resources to address industry-wide needs they may not yet be aware of:

> BSS 2: If not sure what their needs are, I will tell them what we offer in business services: incumbent worker training, internships, OJTs [on the job trainings], job fairs. With incumbent worker training, they don't realize the opportunities that they have, like lean 6 sigma or other training we can do.

BSS 3 explained that his role is important in terms of not overwhelming a business, and just having them know that you are there. Listening to them and then prioritizing how to assist them is the best approach. As a BSS, the goal is to streamline things for the business and make sure they get everything they need. BSS 2 viewed listening to businesses as important in regards to capturing the information that *"isn't in the job description; like are they willing to work with people with a background that's bad or felonies".* In this regard, information gathered in business listening sessions can be shared with other groups, and have a wider impact.

Lastly, interviews highlighted that when a BSS listened closely to businesses, they began building long-term, reciprocal relationships and trusts with them, all key factors in successfully sustaining the cross-sectoral partnership developed through the Pathways program. As BSS 2 put it:

> BSS 2: Some of it is relationship building. [A BSS] walking in off the street might not be able to get at that major issue. But if he helps them with the smaller things, [e.g.,] get the training they need, CPR instructor, find a welder, it will help build trust so that we can get at the bigger issues that keep them up at night. [A BSS] goes from knocking on doors to them [the employer] calling him actively. [BSSs] don't have to do as much outreach because businesses are coming back for help. That's a concerted effort on his and their behalf. Little wins build trust.

Reporting

Based on business visits and engagements, BSSs submit monthly Business Engagement reports to CIS in January, February and March. These reports were cited by partners and non BSS-staff as critical pieces of information on which they were able to make decisions. In these reports, each BSS did the following:

- List business engagements and all strategic partner activities for the month with a short description and outcomes in each occupation area.
- Describe how businesses have contributed to an industry-led development system that builds a pipeline of skilled workers in the specified occupation areas.
- Describe their own efforts to create opportunities for participants (e.g., curriculum, portal, Credit for Prior Learning)
- List challenges, success stories and lessons learned during the month and their proposed best practices based on them.
- Document all leveraged resources they contributed that were not paid by Pathways grant funds.

The BSS functioned as an important conduit between the Pathways program and the regional workforce systems collaborators and between training partners and businesses. The work of each BSS strengthened sector partnerships in each industry sector, and led to enhanced outcomes for participants and businesses. The Navigator, CIS, and BSS were all supported by the Data Analyst, the last unique and critical member of the Pathways program team.

Data analyst

Data reports and analysis conducted by the analyst was used by staff to:

- Target participants
- Target businesses
- Target training providers
- Inform decision making

In each phase of the evaluation planning and implementation, Pathways staff highlighted the importance of data and data-driven decision making. For them, data driven decision-making means that they are able to continually assess their progress in order to move resources where they are needed the most, stop doing things that are not meeting program expectations and goals, and use the limited time and budget resources to affect the most change for participants and the community. In service of this culture of data-driven-decision-making, it was important that a full-time staff position be dedicated to capturing, analyzing, and reporting data.

Types of Data Produced

Table 4 includes a list of reports that are created and shared between different Pathways members in each quarter. The data analyst (co)creates four of these reports: Participant Outcomes Data Report, Quarterly Progress Report, Business Engagement Data Report and PIRL Data Validation Report.

Table 4: Highly Utilized Data Reports, Audiance, and Frequency

Report	Generated by	Audience	Frequency
Participant Outcomes Data	Project Manager & Data Analyst	Navigators	Weekly

Status Report, Success Story, Finance	Project Manager	NRMR Chief Local Elected Official Board	Monthly
Budget Reconciliation	Project Manager	Fiscal Operator	Monthly Quarterly
Quarterly Leverage	Project Manager	Fiscal Operator	Quarterly
Quarterly Indirect Cost	Project Manager	Fiscal Operator	Quarterly
Quarterly Progress (quant and qual)	Project Manager	DOL	Quarterly
Business Engagement Data	CIS, Data Analyst	Business Specialists	Weekly
PIRL Data Validation	Data Analyst	Navigators	Weekly
Monthly Participant Progress	Navigators	Project Manager	Monthly
Monthly Business Engagement	BSS	CIS	Monthly
PLA Progress	CAEL	Project Manager	Monthly
PLA (Cross Walks) Progress	VCCS	Project Manager	Monthly
Portal Progress	LFCC	Project Manager	Monthly

Data Analysis and Utilization

One navigator highlighted the vital role of the data analyst in providing and checking data and assisting team members through working with and interpreting the data report:

> [The data analyst] is an integral part of the program - if we need reports run as navigators, we can let him now. He works mainly with [Project manager] and CLIO, and WIBs. We have quarterly data reports. He runs the report to see how many data errors we have. We clean it up. Once we get to 0 errors, it gets certified. At the beginning, I had to have several conference calls with him to walk through how to connect relationships in inputting stuff into the database. He is in the background, the unsung hero.

The data analyst helped the CIS, BSS and Navigators target businesses and training providers who offer credentials for higher paying jobs. Early in the project, team members cited evidence that increased data availability positively impacts program outcomes: in healthcare, with frequent and trustworthy data on openings along with clear standards for credentials needed for nursing across the region, working with this sector easier and more efficient. When team members found that needed data was not readily available, they reached out to the

Project Manager, or to one another to design creative data collection tools. For example, the Navigators spearheaded a major system-wide effort to revamp and streamline participant intake forms which reduced redundancies, improved participant confidence, and enhanced collaboration among Integrated Resource Teams (IRTs). By continuously sharing and engaging with the data, the entire team greatly enhanced their ability to gather quality information, analyze it, and apply it appropriately to address the problem at hand.

In addition to project-level data, Navigator 2 explained that analyzing national and state data also informs decision making among the team:

> Navigator 2: We look at LMI [Labor market information], help determine what the in-demand occupations are. What growth occupations are. So we can determine what focus is. Look at wage data. In the process of implementing a sector strategy approach. Helpful to look at LMI, job postings to determine which sectors to focus on first. Healthcare, advanced manufacturing, IT, construction and building trades. For our area, the business services team looked at LMI along with anecdotal data directly from employers to determine that focus here is manufacturing, construction and building trades, logistics transportation and warehousing. That's based on VEC information and state LMI website. VEC provides job posting data through VOS.

The data specialist, through their collaborative efforts with other members of the team, was able to enhance service delivery, promote efficiency, reduce unnecessary or wasteful spending, and evaluate program successes. This brings us to the final section of the staffing report: a focus on not just the individual positions, but on staff's ability to function as a high performing team.

Development of High Performing Teams

While each staff position contributed something unique to the program activities, it was their collaborative work, as part of a high performing team, that enhanced their success. The staff self- identified early on as highly collaborative, with the WIB executive director highlighting their cooperative nature as key to their effectiveness. This section includes 1) results from a formal assessment of Team Effectiveness; and 2) descriptions of key processes, evaluations, systems, and activities that accompanied this high degree of effectiveness. Currently, there is no agreed upon set of dimensions, factors, skills, or activities that can explain differences in team functioning. Recognizing the importance of high performing teams to the Pathway's program, the CECE team employed the Team Effectiveness Questionnaire as a tool for self-assessment reporting. We explain this tool in the following section before presenting the results of the assessment and follow-up discussion.

Key elements of a "high performing team"

Team performance is a combination of task outcome and team cognition. Team effectiveness is seen as the key contributor to overall team performance. In general, there are five main ways to assess performance including evidence-based measurement, behavioral observation scales (BOS), and self-assessment reports (SAR)(Kendall & Salas, 2004). SAR and BOS techniques are similar, meaning self-assessment and assessment by an objective observer "produce overall similar results" (Anderson, 2017, p. 517). The CECE team therefore chose the SAR method, and administered the "Team Effectiveness Questionnaire" developed by the University of Colorado[6] to Pathways' staff. We then used the scores to guide a discussion of the relative importance of each criterion to the project. The questionnaire centered around eight

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[6] https://www.cu.edu/sites/default/files/Team_effectiveness_questionnaire.pdf

aspects: Purpose and goals; roles; team processes; team relationships; intergroup relations; problem solving; passion and commitment; skills and learning. For each category, staff answered a series of six – ten questions on a scale of "strongly agree – strongly disagree", such as "team members understand one another's roles" or "overlapping or shared tasks and responsibilities do not create problems for team members". Figure 9 presents the aggregated results per category (see Appendix B for scores per question). These indicate that though the team ranked themselves extremely effective in all eight areas, their shared purpose and goal were their strongest team qualities, while a relatively lower score in relationships was, we uncovered in the focus group, an indicator of burnout due to staff turnover. We take a closer look at four of these areas: purpose and goals, roles, team processes, and relationships.

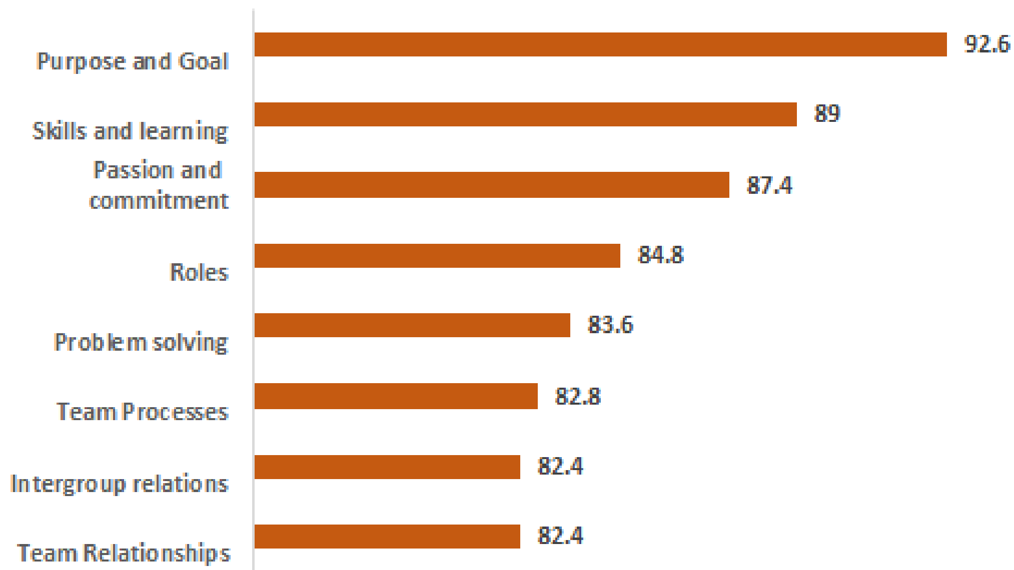


Figure 9 - Self Reported Scores for High Performing Teams

Shared purpose and clear roles

According to the survey results and the discussion afterward, Pathways team members seem to agree that as a team they have a meaningful, shared purpose and as a group they feel strongly committed to their shared mission. Some team members felt the need for focusing on big-picture strategic issues as much as on day-to-day activities. Regarding the clarity of roles, members believed that currently, they all clearly understood their roles. However, some members mentioned when team members' roles change, there is a lack of plans to help them assume their new responsibilities. Members also found high turnover rates challenging;

> “there is just a lot of turnover. we started with three business service specialists in [one area], and that goes down to one, and then [the other area] having big periods of absolutely no one was filling that role”.

Lastly, the team saw different practices for a certain role depending on the information received and/or the network of individuals/ businesses one has to work with.

Team Processes and relationships

In response to evaluating team processes, the team agreed that their current method of problem-solving results in effective solutions. However, they could see improvements in having more productive meetings and rewarding individuals for being team players. Under team relationship criteria, members agreed that they appreciate one another's' unique capabilities and vitality of each role for the project’s ultimate success:

> You wouldn’t want to do the program without any of the positions - they’ve integrated themselves, so you rely on each one and who to call, what to do, who to pass things off to (interview with Navigator 2)

When asked about trusting each other, the members mentioned that the trust building process is always intentional and active in nature:

> In a high performing team, the number one thing is trust. To me, the takeaway is if you don't have that ultimate trust, you can figure out how to work together and be respectful and professional and keep building on it. Trust - you don't throw people in a bag and shake them up and they're fabulous team members and everyone sings Kumbaya. It doesn't work that way. The Pathways’ team is well aware of how building trust is a non-linear, complicated process and they have worked hard to build their team throughout the time. We're doing our best. And we have challenges, you can still perform highly and work on your trust issues. But

> human beings are messy. We bring with us all the [things]that we've dealt with in our lives outside of the eight hours that you work in a day and there's just reality. So I would not [believe] anyone that says that they have a team of ultimate trust because human beings are messy, and we do our best.

Key evaluation/process/systems/activities contributing to success

While most peer programs solely rely on external evaluators, the Pathways team considered themselves in a continual state of improvement. Bringing evaluative thinking to all of their work allowed them to scrutinize and appraise their work against agreed upon, or evolving standards (and note when those standards needed to change). Participatory evaluation processes and evaluation capacity building are critical to the program's success. These evaluation activities included:

- Regular planning meetings
- Frequent testing of assumptions
- Actively checking data
- Collaborative data systems
- Incorporating best practices
- Constant review and revision

The team used periodic evaluations at different levels to constantly monitor the effectiveness of processes and effectiveness of outcomes. By holding annual planning meetings, they not only refreshed their strategic plan's strategies and tactics but also provided an opportunity for stakeholders across the region to become aware of future plans.

> Director: At the end of every year, we pull both of our boards together. And we do a strategic plan update over lunch. The intent is to ensure that all of our major stakeholders are as informed as they can be. And that we presented in a way that they could dissect down enough information to understand what would be successful and not successful and where we're struggling. So, the intent is always to make sure we give it to them in a method that they understand.

During the focus group, staff noted that of the evaluation activities, frequently testing assumptions has been the most influential and vital:

> BSS 2: clarification of assumptions, getting corrections from team members, or [holding] discussions about our initial assumptions [are key]. The assumption about companies' expectations for participant education level. It's the same thing with credentials – companies might be interested or not. Assumptions [are often] not based on information from the source itself. We've had some discussion about our initial assumptions, like our assumptions about IT companies and how wrong we were with those.

Relatedly, team members actively check the data, and have a thorough understanding of how it is created and interpreted. In one focus group, members shared that the team is:

> Constantly verifying the data we're collecting and how we're collecting it, and how it goes into the system. And then what it spits out at the end, what we say we got at the end. So that's been a constant state of watch and change.

Having collaborative data systems, such as B2B engage, has facilitated high performance among team members by avoiding duplication and parallel efforts, "*we have a platform where we can see who has contacted what."* (interview with BSS 3). Navigators are also more satisfied with online systems, versus analog systems, that make processes more efficient:

> Navigator: In the beginning, we had 15 documents that we had to print all and filled out. Now we have about 5 you should sign, and the rest of them are electronic. That was a big thing. After they got filled out, then got printed out and signed, then we had to scan every single one of them back into the computer.

On the other hand, the CIS mentioned that when processes are formalized and information gathering and analysis is automated, there is a need to evaluate and plan out a process based on what information is really needed and the steps that need adjustments. One navigator gave an example of how this constant state of process evaluation has optimized intergroup collaborations:

> We had a consistent change in information form in place. The one that had the signatures and everything, I turned it to the office in New River. They can't use it. Because it doesn't have student ID numbers. So, we changed the CP [form] to include student ID numbers. And that bounced back on. Our contact module used to put the student ID numbers in contact, we no longer did because we made them stop. So, impact on documents and impact on our contact module, so that we were not having duplicate stuff. We just worked through it and found some more bugs like every other form we have and kept revising.

During focus group discussion, a Navigator described a process where others learned from a successful practice and soon the process changed to embrace a more efficient model:

> Early on in recruitment, we're dealing with certain big groups that we need to know more and we didn't want them filling out all these forms unnecessarily. So, I'm just keeping a cover sheet with some basic information on it. And it became clear pretty quickly that we were going to need something that all the navigators can utilize in the same way that will get us all the information we need. Pre-screening - before they start filling out these 15 packs of paper. So then we had to come up with a universal pre-screening form.

As a high performing team, the Pathways staff continuously revised their communication and data sharing methods. The CIS explained the collaboration platforms' evolution as becoming more inclusive and efficient over time.

> It evolved into the process of the notes being taken in a Google Doc that everybody can edit and see at the same time, and then [the project manager] is specifically guiding that. Then in Project Hub, you have an agenda that is free format. So as the navigators went through recruitment and enrollment, and getting all those documents signed, etc., they could add points to the agenda that they wanted to discuss because it was a problem, or they wanted some extra advice on it or etc. Instead of those two-hour-long phone calls, she does this manually through the agenda. And so eventually, it just became a phone call, a Google Doc, and the Project hub that you could toggle to be able to modify that process.

Or as staff mentioned in a focus group;

> "That database doesn't look anything like the original database that we have on the B2B side. We've even made a few changes on the backside, but much smaller."

Partnerships

In workforce development programs partnerships are critical both to individual project success, and also to the long-term sustainability of initiatives built by those programs. To explore partnerships in more depth, the evaluation team specifically explored how relationships were developed through the project. We found four key partner types, and differences in the way that those partners interacted with staff: participant-serving partners, business-serving partners, project partners, and individual businesses/employers. They also wished to understand the value of Integrated Resource Teams (IRTs), which provide holistic services to participants intending to fill training and service gaps and avoid duplication of efforts. For relationships, the key evaluation questions were:

- How were relationships built?
- With whom did we build key relationships?
- How did the relationships change over time?

For IRTs, they were:

- What are the holistic services provided through IRTs?
- How does a combination of services serve participants better than non-holistic services?
- What training and service gaps existed prior to Pathways?
- What training and service gaps still exist?
- What are some examples of duplication of efforts prior to pathways?

Partner Types

Partners are divided into four primary types[7]:

1) **Participant-serving partners**: training partners such as community colleges who interface directly with participants (individual job seekers or the underemployed); additional service providers.
2) **Business serving partners** assist regional businesses and attract additional ones to the region. They can include local industrial or economic development authorities (IDAs/EDAs), regional economic development organizations (EDOs), and local chambers of commerce. Business-serving partners can help identify business needs, communicate

[7] The evaluation team identified key partnerships through quarterly narrative report review followed by staff confirmation.

workforce needs to LWIAs, assist in the development or funding of training programs, and link businesses and employees to LWIAs.

3) **Project partners** are contractual members of the Pathways program, but their involvement is not limited to serving only businesses or participants. For instance, Lord Fairfax Community College is a project partner that developed an online portal used throughout the project; the Council for Adult and Experiential Learning (CAEL) implements and assesses the Prior Learning Assessment (PLA) component of the project; OCS and CECE provided evaluation and workforce data services.
4) **Specific companies** in the region that developed working relationships with the project team.

Appendix C shows the partners who are mentioned through Quarterly Narrative Reports by frequency.

Characteristics of Successful Partner Relationships

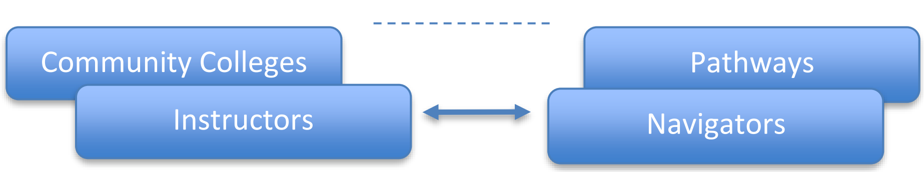
Personal relationships built on mutual interest and trust were central themes across interviews with participant-serving, business-serving, and project partners. The following analysis divides the feedback between participant-serving and business-serving partners. In terms of the relationship between participant-serving partners and staff, on-on-one in-person meetings helped develop an initial understanding, and the relationship grew through frequent contact between different levels of the organization – for example, Navigator liaising with instructor, and Executive Director working with the community college president. Caring, mentoring relationships between the Navigators and participants were viewed favorably by participant-serving partners, and the visible manifestation of that shared mission facilitated trust and mutual respect. Relationships with business-serving partners were facilitated through Business Service Teams (BSTs). Many of these partners relied heavily on existing networks created before the grant period. However, staff and business-serving partners agreed that having a BSS in each region who viewed relationship building as a key aspect of business assistance was crucial. Given the sensitive nature of company data, sometimes information cannot be entered into shared systems; the BST provides a space for business-serving partners to collaborate, problem solve, and achieve greater shared outcomes.

Relationships with participant-serving partners

Relationships with participant-serving partners that led to better student outcomes shared one or both of the following characteristics 1) they relied on in-person meetings with instructors; and 2) they are fostered through the provision of a broad range of support services that meet the student's specific needs.

Developed understandings about the project with in-person meetings

The Community College partners and the Pathways program have two different relationship levels. One is the institutional relationships between program leaders and various colleges, and the other is individual relationships that Navigators initiate with instructors and students in each department.



Partner faculty and staff highlighted connections between individual instructors and the Navigators as a key factor in building a successful partnership. Furthermore, this individual relationship building is critical to recruiting participants and enhancing student outcomes. The NR/MR WDB executive director explained that partner understanding of the project value and its intended impact increased through presentations by Navigators, followed by one-on-one meetings. When asked about how the project team may work differently with community colleges to have them see the value, the executive director explained:

> Executive Director: There were certainly some colleges [where the] relationship really took off because the Navigator went into the school, in the classrooms, and made the pitch to help students who needed help.

When asked about what their key relationships in the project are, multiple participant-serving partners answered that Navigators are their primary contact or informant regarding the project. Participant-serving partners mentioned that there had been various initial understandings about the project, such as cumbersome processes or qualification difficulties, all of which discouraged participants to apply until Navigators were given the chance to elaborate. When asked about why students did not apply for funding previously, one partner responded:

> Participant-serving partner 3: [Students don't apply] because either students don't think that they will qualify [or if] it's a lengthy application, they just don't have time. [They assume] it's a cumbersome process, they just don't feel like they have the time to do it. So many of the scholarships go unused. [...] [Pathways] was completely different [...] because the Navigator actually comes in person and explains it to them. And not only that, she tells them what to bring, what they need to have, and how they would qualify… [She explained] how and what exactly [the money] can help them with. [...] She walks them through the process of applying, and to my knowledge no one has ever done that for students to walk them through that.

As a whole, participant-serving partners described that once they understood the project, they were able to help Navigators set up meetings with students, make referrals of new participants, and coordinate paperwork.

Relationships between instructors and Navigators were not without challenges, especially when the participant serving partner experiences internal communication lapses. One challenge that was encountered was consistently getting information from instructors to the participants. One of the Navigators mentioned that some community college instructors may miss information about the project when they are notified via email as they assume that it has already been shared or believe that students need to take care of it by themselves:

> Navigator 2: Sometimes instructors slide it by - All instructors don't intentionally slide it by - they think that the information has been shared, you're an adult, we're not your babysitters. That's their attitude.

However, it is exactly the close relationships that students build with the Navigators, described in detail in the staffing section above, that appears to make the difference in terms of student outcomes.

Evolution of relationships

Navigators' relationships with participant serving partners have evolved from initial in-person "cold-call" visiting to frequent phone calls and emails to further discuss the project. A result of this evolution was an increase in interaction frequency interaction between the Navigator and the partner, along with the recognition that the Navigator needed to be brought into the process earlier to enhance student outcomes. When asked about the relationship change, one training provider explained:

> Participant-serving partner 2: My relationship changed with her when I became the program head, you know, obviously, we were in more contact, closer contact, based on coordinating schedules and things like that for the students. [...] We definitely became more prevalent and had a more personal level relationship.

Throughout the years, Navigators and community college directors and staff have found suitable processes and timelines for recruiting participants and have expanded relationships with other instructors and program heads. Another training partner explained when asked about how their relationship has changed over time:

> Participant-serving partner 3: In the beginning, I needed to be oriented and informed about the grant. And then once I was informed about the grant, it was just figuring out how to do this best. And to have her come and talk to the students and once we kind of figured out the best way to do it. It was really just, she would just contact me and I would [do it]. And then we kind of figured out ‘okay, we needed to start earlier, because her getting in contact with the level four students, it wasn't enough time’. So we figured out that she needed to contact the students in level three at the end of level three to get them started. So we just kind of figured out how to do it a little bit earlier. And she started working with the students in level three before they progressed to level four.

Relationships with business-serving partners

The partnerships formed between Pathways staff and business-serving partners were different in scope and nature, but similarly relied on one-on-one formal and non-formal communications. As a whole, successful relationships with business-serving partners shared one of more of the following characteristics:

1) Identification of a primary point of contact at the WDB
2) Utilization of existing relationships and networks
3) Sharing of business engagement and outcomes across teams

Multiple business-serving partners said that despite knowing other staff at the Workforce development board, their primary contact person remains their regional Business Service Specialist (BSS) when they’re in need of assistance or resources. As introduced in the staffing section, BSSs are in charge of developing systems and coordinating with the region’s BSTs and other partners to provide services to businesses in each Workforce Development

Area. Each area differs in the way that the BSSs operate within the BSTs and with their partners, however, the one thing they all have in common is providing direct services to businesses including recruitment, screening and training, as well as the referral of select participants to targeted jobs. BSSs' share their direct business efforts as well as present regional workforce system and labor market information and resources with partners during BST meetings and at presentations at business association meetings. BSTs also help coordinate special events for businesses and their partners including knowledge sharing events/roundtables and job fairs.

When partners identify a particular need for a company, they contact BSSs and together visit the company to listen to and assess their business needs. Business-serving partners are typically the ones who initiate the process of business assistance by letting the BSSs know that partners or businesses are planning to conduct particular training, or if there is an identified gap in businesses' operations. The WDB then steps in with financial resources for training to help fund those needs and potentially inform other partners in the ecosystem. BSSs provide information and complete paperwork before beginning business involvement, which helps to bridge the gaps and make processes simpler. In an interview, one business-serving partner described this process in detail:

> Business-serving partner 1: We hear that maybe they're [a select business] thinking about doing a particular type of training or that there may be a gap in whatever their operations are, and the Workforce Development Board has been able to step in with training dollars to help fund those needs and potentially bring somebody up to speed on a particular spot on the line or whatever the operation might be. So, we get positive feedback from the businesses whenever we're able to bring those opportunities to the table. I have to brag on our BSS, she always does a nice job of having as much of the information or as much as the paperwork done as she can before getting into the business. And that really helps bridge those gaps and helps businesses who want to work with this and other programs, because it just makes it simpler.

Existing relationships and networks

Unlike training partners, it is difficult to identify how exactly relationships with business-serving partners were initiated and developed during the course of this program. One reason for this could be that relationships were established in the region before the project. One business-serving partner mentioned in an interview that she was already familiar with the Workforce Development Board and Pathways even before she occupied her current position:

> Business-serving partner 3: I work pretty closely with BSS at the Workforce Development Board, and in terms of delivering business services. And then a little bit historically, I worked five years at People Inc. before I came to VEDP and served in area one workforce development area. So, I was with the program operator at that time, so I was kind of familiar with Pathways, even before I came to VEDP.

Another business-serving partner said that it was easy for her to work with BSS because she already knew BSS before she joined the Workforce Development Board:

> Business-serving partner 1: That is maybe a unique situation because [BSS] had my position before she moved on to. She was the associate director at the JIDA for a couple years before going to the Workforce Development Board.

This shows that partnerships on the business-serving side have greatly utilized the existing relationships and networks.

BSS perceiving relationship building as a core aspect of business assistance

The BSSs consider relationship building to be core to their work, and put great effort into building new relationships through promoting their services to organizations. One BSS said that she thinks business-serving work is all about relationship building only available by investing time with people:

> BSS 1: I do think the work that I do is all about relationship building - only way to do that is to spend time with these people do talk to them, to listen to them.

Another BSS emphasized in the interview that she thinks relationships with partners are built based upon shared mission, objectives, goals, willingness to work together for a better community and region, trust, and open communication with those relationships:

> BSS 4: [For relationship building, we] have to have shared mission, objectives, goals, willingness to work together to achieve goals for betterment of community and region. [It is critical to have] trust and open communication within those relationships.

Sometimes, however, when multiple organizations in a region share a mission, clients, objectives, and goals, the competition for resources seeks to divide, rather than unite these organizations. We found that trust and open communication is farther along in some regions than others, and that each BST have varying levels of trust and communication between partners. A lack of open communication and mutual trust can harm the BSS relationship with businesses when there is duplication of efforts, or the BSS isn't able to share the most up-to-date information. One BSS lamented:

> BSS 3: [W]hen you go to visit an organization, you provide them [with a] full list of potential services<u>, not what you can do but what everyone else can do with them as well.</u> This would be a goal, but building trust relationships is hard in our region, so I'm not sure if we'll ever get there [to a point where we are marketing each other's resources holistically].

Sharing of business engagement and outcomes through informal communications and Business Services Teams

For communication about ongoing business engagement and outcomes, partners said they did not follow a formal process to communicate back to the BSS about business progress and outcomes. Most partners maintain contact with the BSS via phone and email if they need information about progresses or outcomes of business engagement. Sometimes this presents a challenge when quick access to data is needed[8]. One business-serving partner shared how she was informed about business engagement results:

> Business-serving partner 2: I emailed BSS and I said, I remember you physically going to several companies with me? [...] Do you know exactly what you provided? [...] And I knew she had met [the businesses] with me, and she was working with the companies, but I didn't know exactly what she had done for those companies.

In addition to the personal communication through phone calls or emails, one coordination method is through the BSTs. As described above, each BSS (and sometimes Business Services Coordinator, depending on the region) works with their respective region's BSTs. The BST's main purpose is to build and maintain relationships with local businesses through customized workforce solutions so that the workforce system can be poised to meet businesses' unique needs.

When asked about the primary communication tools in the project, a business-serving partner cited business solution meetings as a way to stay informed:

> Business-serving partner 2: I go to all the business solution meetings and that sort of thing, that actually logging in. And doing anything with it. I mean, I've tried to keep that, I go to the Executive director, we have meetings in Wytheville. I'm trying to stay on top of the grants. And on top of the information that I needed to know. **I felt like I knew enough to promote the programs.**

Another business-serving partner said that she encouraged other partners to participate in the BSTs while talking about communications in the project:

> Business-serving partner 3: I actually just talked with our apprenticeship representative not that long ago for southwest Virginia and encouraged her to participate in the business solutions teams because it is a quick way to learn who your partners are and about your businesses in the territory that you cover.

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[8] Note that the B2B Engage- Business platform exists to serve this purpose. The use and effectiveness of that platform is included in the Communications section.

The BST can also be a venue for innovation and progress among system partners. For example, during the interview, the BSS 3 was working with the business solutions team to develop streamlined processes for identifying how businesses could fill vacant positions with the disabled and elderly:

> BSS 3: So many folks that are having trouble filling openings don't think about disabled and elderly people to fill them. Ideally, we want to be the main point of contact for these businesses. Don't know if we'll get to that point - **doing some strategic planning with the business solutions team for streamlining processes for all the partners that deal with businesses in the area**.

Evolution of relationships

No specific changes in relationships were identified in the interview texts with business-serving partners. One business-serving partner mentioned that the reason for no changes is because her relationship with the BSS was already established prior to the Pathways:

> Business-serving partner 3: I don't think it's changed largely because I was so connected with her before I started with VEDP. So I've always considered the Workforce Development Board, one of my primary resources.

Barriers to relationship building

Some barriers to relationship building identified in the project include:

- Lack of transparency
- Staff turnover
- Competing cultures among organizations
- Historical conflict among organizations
- Difference in decision making processes between the public and private sector
- Different perceptions on the grant's relationship to the workforce system

Navigators identified that honesty is important when it comes to working with participant-serving partners. Lack of transparency, regardless of intentions, could hamper relationship building. For instance, an instructor may make a referral for students who are not eligible or do not intend to get a job as they are trained. This damages relationships and program efficiency: One Navigator shared some examples of dishonesty playing as barriers:

> Navigator 2: Instructor wasn't honest about the needs of the students. We had a student who had just gotten out of prison for murder. I didn't know what to do. I asked the instructor if he is able to get a job. The instructor assured that he would be able to get a job as a welder. She said he had connections already (ex-Marine). After he passed training and got credential, he decided he doesn't want to do welding.
>
> [...] In nursing field - I had an instructor who knew that the applicant won't be working as a nurse any time soon because she had money coming in from another source. They need to be able to share these details with me to help figure out how/if we can move them from "applicant" to "participant".
>
> [...] There are some partners that we don't have good relationships with - they wanted us to refer [their program] to people who weren't eligible….We are not working with the training provider anymore.

In one interview with a BSS, one barrier identified was staffing, particularly turnover, because it takes time to rebuild trust and partnership to a level that yields consistent results. When asked about an example of a bad relationship, she responded:

> BSS 1: We don't have the same good relationship with [one particular] Community College - I'm working on that. Part of it is again human. it's staffing. With [another] Community College - with [names of two staff persons] - we've spent years building a relationship. That's getting to know each other, building trust. Person at [the aforementioned college] - that person is relatively new. It takes time to build trust. There's no better way [to build trust] than to complete a successful project together, and we have yet to do that.

The same BSS also identified the partner organization's culture as a critical factor. Partner organizations that have a culture of sharing the glory of accomplishments oftentimes have more success collaborating than those that operate on a more individualist agenda. In response to the same question, she continued:

> BSS 1: It also has to do with the culture of the organization. Organizations who must control everything have trouble partnering. I don't feel the need to be completely in control or in charge - what can I do to make a project work. [I'm] really big on sharing the glory of success - very rarely say "I did", rather "we did". That's helpful in making people feel like they are your partner - making sure everyone who has a part gets credit. Don't feel the need to own everything - it's not mine, it's ours. We each do our parts and are all successful. Mentality might not be the same throughout all of our partners. People are beginning to see more of

> that - sum of the parts. Whole is greater than the parts - we can do more together than in little pieces. I'm really big in talking with partners about finding ways we can work together on things that may not seem to be "what you do".

BSS 3 also shortly mentioned that historical conflict is one barrier to trust building in the region. Relationships evolve over the course of an organizations' lifecycle. While some organizations have strong relationships, others struggle with the presence of historical conflict. Another difficulty that BSSs identified is that different community colleges operate at different speeds as compared to businesses. While businesses actively seek new training resources, community colleges are not always set up to deliver according to a business' timeline. However, through the course of this program, there have been meaningful changes in the way that some community colleges develop and deploy training programs. She explained in detail:

> BSS 4: Feedback from employers is community colleges didn't move at the speed of business. Once they were presented with a need, it would take them a while to put a curriculum together, find an instructor, it was too lengthy to meet needs. Businesses would look for other opportunities like online training or bring consultants in instead of utilizing community colleges. [The community colleges have] taken that to heart and changed processes and ways they are able to put courses together and training.

Finally, it was identified by the director interviews that challenges are faced when training partners see this project as just a financial opportunity to assist their students rather than to develop workforce more broadly in the area. This viewpoint was echoed in an interview with a training partner who, when asked about the relationship's primary purpose, explicitly stated that they see the project as purely a fiscal resource:

> Participant-serving partner 1: [The primary purposes of these relationships are] fiscal resources. If they had transportation issues (like needed a tire to make it to their work site), they got it. The big thing for graduates are [paying for] board exams. […]. Often, they get money to take it the first time, but if they don't, the program provides money to take the test the second time (kids also pass it the first time). Also state licensure costs.

This difference in motivation stems from diverging goals of the board and training partners. While the board aims to bring broader impact into the area, training partners are focused on helping their students more directly. Although the training partners may have varying levels of awareness of the long-term goal of the workforce development project, mutual benefits still remain in regard to successful partnerships for providing resources. However, when it comes to longer term projects that don't have an immediate visible outcome for students, some partners may not see the benefits and see it as a lot of unnecessary work. When asked about the nature of relationships with community colleges, the director explained during a focus group interview:

> Executive Director: So when you're just looking at it **on the participant side, they've just seen this as a great way to get more people to train**. And again, on the altruistic side of themselves, they want to ensure that their students get as much assistance as they can get. So they can be successful. I mean, that's at the end of the day, that's what everybody wants. **Although they are not fully aware of this project as a long-term workforce project, there are mutual benefits in that regard.** Now, when you take the credit for prior learning, you know, I think at the end of the day, we're giving them something, but in a lot of respects, **they can't quite see it that way yet**. Not everybody, somebody fully gets that. But a few of them might be trying to say this is just a lot of work and what am I going to get out of this?

The deputy director expanded on her point by explaining that it is due to the hectic nature of training partners' day-to-day work. The partners often do not have time or incentives to dedicate to long-term project processes:

> Deputy Director: [The project is] **too long term for them when they're existing in a day-to-day frenzy** because they're wearing many hats. You can't focus on what's the long-term benefit from our organization. So they recognize it, it's good. But there's only so much time in the day and we had to come to terms with that reality. It is a lot of work, and they value it. But the reality is many of them are stretched too.

The development and strengthening of partner relationships was critical to the success of partnerships in this project. Though the nature of relationships between staff and business-serving and participant-serving partners differed, they shared a reliance on heavy one-on-one engagement, existing relationships, frequent communication of wins and challenges, and a common purpose. Relationships were hindered by historical organizational-level conflict as well as staff turnover.

Integrated Service Teams

Integrated Service Teams (IRTs) are designed to provide holistic services to both participants and businesses.

Participant Integrated Service Teams

The Integrated Resource Team (IRTs) concept was originated with the Disability Employment Initiative which supports jobseekers with disabilities. An IRT provides an informal, customer-centered partnership between an individual (participant) and a diverse set of services systems. IRTs aim to coordinate services and leverage funding to fit the participants' unique needs and employment goals. Participants or businesses looking for assistance are sometimes unable to access all the services and resources they need and are often bounced between different staff, agencies, and programs. To avoid this, IRTs are designed to improve coordination and communication between service and resource providers to reduce gaps or duplications.

When creating the program, the directors determined that the IRT approach would be a core element. Evaluators confirmed the existence and use of the IRTs in staff interviews and focus groups. However, both participant and business serving partners who interviewed had limited awareness of this approach. This is possibly due to the IRT's informal nature or that IRT members were not interviewed as they did not fit into either partner type. Based on staff interviews and project documentation, we found that services provided through IRTs are based on communication and coordination among various staff, partners, and others who may provide additional available resources. When asked about holistic services they provide, BSS explained:

> BSS 2: If you have an individual who needs assistance in one area - we always have access to a partner or agency who may be able to help them. We utilize different partner agencies. If there's something I can't help them with, I usually know someone who can help.

One Navigator shared an example of how she assisted participants, which seems to describe IRTs:

> Navigator 1: Later today, [we are] meeting with an individual who needs help - WIOA specialist, Navigator, and BSS will meet together to talk. Sometimes, will sit down with businesses, HR manager, CIS, talk about what we can do and cannot do. [...] We like to do it face-to-face. We will all be there together, so nothing gets misconstrued and we get all the information all at one time.

The example below shows how staff in various positions work together to serve a participant. Another Navigator shared an example of how they work with BSSs to seek employment opportunities for participants:

> Navigator 2: [If we work] graduating class of 12 LPNs at CTE in a rural county with one hospital. To seek employment, [we will be] looking at an hours travel. BSS will go to human resource departments, see what the availability will be for these students, and make arrangements to interview students before they graduate. [So that we] can get students in for an interview right at the end of training. [It] helps for employers to get to know them - 90 day contingency plan. Usually easy for healthcare.

While the partners interviewed did not recognize the name "IRT" when we explained the definition of an IRT, some did describe how they worked collaboratively to identify services and resources based on the unique participant needs:

> Participant-serving partner 2: When it came time [...] to look at the student's financial aid, the Navigator was able to determine if there was a gap. The students primarily would talk with her about that, if they had an issue [...] there wasn't a formal process. We just kind of did it organically. I can't explain that. It up and it just happened.

Business Integrated Service Teams

Similar to the IRTs, the holistic services are also provided to businesses in the project. As mentioned above, one IRT feature is to provide a combination of services and resources from multiple systems and programs. When asked about how she communicates with partners and clients, the BSS said she looks at herself as a liaison between businesses and the workforce resources in the area:

> BSS 1: When I talk to companies, I don't usually start a conversation with - "hey I work for XX organization and we do this". Usually I start conversations with - "I am a part of a network of organizations whose focus is helping companies grow and thrive in our region." Because I truly think about what I do is what I do. I am just the person who brings people together. I look at myself as a liaison between businesses in our area and the workforce resources in our area. I understand a little bit on both sides. I like to think I can speak the language of business and I know their concerns, what are they looking for.

One business-serving partner said that she sees Pathways as "resources" rather than a specific project when asked about what it looks like to assist businesses with Pathways programming:

> Business-serving partner 2: I try to promote resources. When I sit down in front of a company, I don't have all the knowledge [about the project], since those are not our programs.

Benefits of IRTs for Industry

Interview data showed that the holistic services provided in the Pathways project fill gaps regarding the needs of participants, businesses, and partners. These gaps vary depending on the industry sector, but are categorized as information gaps, funding gaps, and training gaps.

Healthcare

As mentioned above, training partners and participants have historically held misconceptions about the project, such as eligibility being dependent upon poverty levels, or that the process seemed too cumbersome. These information gaps were primarily identified from interviews with training partners in the Healthcare area. Navigators worked to address these assumptions through visiting community colleges directly. IRTs provide individual participants with detailed information and correct misunderstandings so participants can learn about available resources and how to apply. The interviews with the Navigators and training partners in the healthcare area revealed there are expenses, such as books, exam review programs, and fees that cause students to delay board exams. One Navigator pointed it out:

> Navigator 1: Especially with healthcare, so many fees, tests, and etc. [are needed]. At the end of graduation, to be licensed is difficult. [We] let her know the situation, program that she was in, [...] and who to talk to. [We asked her to] call us and let us know what we need to do to get the participant in the books.

According to the training partners, students who delay the exams are less likely to pass the exam than those who take them right after the program ends. Financial aid can help students take board exams timely and improve the pass rate, which is critical for training partners to maintain their programs. One training partner detailed all the hidden costs during the interview:

> Participant-serving partner 3: **A nursing program is ridiculously expensive.** It is more expensive than you know. Any other program because of **books, supplies, uniforms**. I mean, just everything. And so most of them have exhausted everything. they've exhausted their family, they've exhausted their scholarships, they've exhausted financial aid. So at the very end, when they need it the most when they're hanging on a thread, this comes in to get them through that final push at the very end. **And because those barriers will prevent them from entering the workforce**, when we need them in the workforce at the earliest possible time, because what we know about students taking their licensure is **the earlier students can take their licensure after they graduate, the more likely they are to pass.**
>
> [...] I have seen less of Students saying I have delayed NCLEX because I couldn't afford to pay.
>
> [...] So we want them to go ahead and take because we know the pass rate is higher, if the earlier they take. So we want them to take it as early as possible. So we don't want finances to be a barrier to them taking them and because we have a stake in them passing. So we have an ulterior, we want what's best for them, too. We want them out in the workforce. we've got a stake in that too. [If] we have our pass rate goes below 80%, we could be in trouble with the Board of Nursing. And only our first-time pass rates count.

Manufacturing

In the manufacturing sector, one business-service partner explained that existing business assistance funding prior to Pathways was only available for new employment, not for upskilling current employees. They described in the interview that how Pathways' holistic approach helps training for existing employees:

> Business-serving partner 3: I need Pathways and incumbent worker training, because I don't have funding to upskill people who are already employed. This project fills a big gap that I don't have the funding to fill because the [economic development incentive funding] is just for net new jobs. So, people who are already employed, I don't have funding for them. I really rely heavily on Pathways and incumbent worker training for that.

One BSS mentioned that they actively helped businesses get training or knowledge through the holistic approach by closely working with the training partners. In the interview, BSS shared the example of assisting employers who look for training on software skills:

> BSS 4: What I do mostly when it relates to Pathways on the manufacturing side. CC helps determine if they have the ability to provide training or knowledge the employers are seeking. When employers look for training on Microsoft, but they don't need a credential, we go directly to CC and tell them they need excel training and ask them if they can put together something that works for the employers. We work together to see how many, what the cost would be, timing, schedule and etc.

IT

While the holistic services have been filling the gaps in the Manufacturing and Healthcare areas, no clear evidence of improvement was identified in the IT area. According to interviews, it is more difficult to assist IT businesses in the region because their needs are more specialized and mostly about recruiting experienced employees rather than credentialing or training the underemployed. When asked about the differences among industry sectors, one BSS explained:

> BSS 3: For IT, it is difficult because credentialing is not as important as in the other fields. There are opportunities for training that don't end up with credentialing, which is a requirement for Pathways.

One Navigator pointed out the different expectations between the employers and training partners that makes it difficult for local training partners to provide training programs that guarantee graduates jobs in this field:

Navigator 2: In the IT field, **employers put more value on experience versus the credential.** Going back to the beginning, we hit local IT companies with BSS and asked “do you need help with your training?”. **At the beginning, [we] didn’t have the knowledge to realize when you’re talking to the training providers who said that the students would come out making $50k a year - they graduate and couldn’t get an entry level job.**

Communication

The final unique element of the Pathways was communication. The program invested heavily in informal communication and strategies, as illustrated in the staffing and partnerships sections above. The program also deployed project funds to develop and managed several shared databases, meant to facilitate information flow between project partners. Strategies differed based on whether the communication was internal or external. The section concludes with a description of the communication strategies identified as particularly effective in this program.

Key program communication tools

The Pathways' team benefitted from multiple tools to communicate internally and externally with partners. This includes both collaboration tools (e.g., Google docs/shared spreadsheets) that facilitate the team members' work toward a common goal, and project management platforms (e.g., Project Hub, Business-to-Business (B2B)) which help teams with coordination and planning of timing, tasks and dependencies.

The team initially used a video conferencing platform similar to Zoom to meet regularly and share updates. However, due to technical issues such as video lags and poor connections, team members decided to switch to conference calls with a member taking meeting. Feeling the need for a visual platform to discuss charts and trends, the group switched to calls in which everyone had to log into a certain website (e.g., Project Hub or B2B) with the project manager making sure everyone is on the same platform and page. This communication process is complemented with notes being taken in a Google Doc where all team members can collaboratively edit and see document changes. The team has tried multiple platforms for similar/various purposes and target groups. Using these software packages has facilitated data sharing, "

> Navigator 3: instead of those two-hour-long phone calls, we do [updates] manually through the agenda"

However, in one focus groups, the CIS mentioned having three separate communication applications can be confusing and inefficient to some extent:

> [IT is] confusing, the difference between B2B business and B2B participant and Project Hub. Why are those three separate [platforms for data sharing] and why do we need distinctions?

A Business Service Specialist noted that the team was encouraged not to invest heavily into B2B and Project Hub as they "won't last past the life of the grant". In the following sections, we examine each project management communication platform more closely.

B2B Engage

B2B-Participant also helps training providers for recruitment.

B2B Engage is a Customer Relationship Management (CRM) platform that manages business and stakeholder engagement workflow processes in workforce and education, matches job seeker and student talent with employers, automates communications and outreach, and supports collaboration within and among workforce development, education and economic development markets. Some team members viewed this collaboration tool so helpful that they *"can't imagine the program without it"* (Focus group interview).

B2B-Business

There are two B2B Engage platforms: business and participant. The B2B business platform shows business engagement reports, integrated needs assessment and survey tools. Partner collaborators have the opportunity to share and upload documents, chat with team members and benefit from integrated calendars. One partner viewed B2B Engage as an effective resource in bridging the gap between key stakeholders:

> [A BSS] reached out with rapid response funding available that was COVID related and said, “Hey, I've got this money available. Who do we know that could use it? And so pushed that out of and into the community [through b2B platform] and each of our partners who are having different conversations at different levels will chime back in and say, “I think I've got a need and we may be able to match the funding up” It's hard to keep in touch with everybody all the time, so it's nice to have a resource.

Another partner saw B2B most helpful as a “universal spot” for accumulating data from different venues, however keeping the platform updated and having everyone contribute can be a challenge:

> Well, I think it [B2B Engage] is still fairly new for our group. It's an extra step that we have to take to make that information useful across the board with our participating partners. But it is nice to have a universal spot to be able to plug things in, especially contacts. I'm not great about lugging phone calls and whenever we do group things like a manufacturing roundtable or a job fair or something like that, we're trying to go back and say who was there and if there are any other notes, we can go back in. But usually it's just a handful of folks that are using it. And I guess probably within the last year or so, we've slacked off on training and reminding people to utilize that tool, especially in the middle of COVID environment, but it's been nice to have, still learning.

One partner finds B2B Engage especially helpful in fulfilling manufacturing workforce needs:

> Lots of times, I've got a company that has maybe had some changeover. Folks move around a lot in manufacturing. I was able to go in [B2B Engage] to see if anybody else has had contact with somebody else, after my contact is no longer there. Who else can I reach out to? Who else has made contact with the company? And we've still got some folks in [some counties] that are not on B2B engage. And after I visit with them, I try to remind myself to go look and if I know that there's something that needs to be on there, it's nice to be able to log on real quick, I get into my bookmarks tabs.

Despite its benefits, not all business-serving partners use B2B due to a potential duplication of efforts:

> One of the partner users saw overlaps between B2B Engage and Salesforce online tracking system, "I have used it. And I think it's a good resource, but for me it would duplicate what I already did". Another partner who does not use B2B Engage, believes that in meetings one "get more out of and [is] able to network a little bit".

B2B-Participant

Similar to B2B business, B2B Participant platform also went through several adjustments. The team had to make some changes in input/output especially in initial phases but after a while they feel confident:

> Navigator 1: [B2B is] at the best point and is very manageable now. [Compared to manual procedures and paper files, B2B] helps eliminate redundancies, reduces paperwork and leads to less duplication of efforts

While at first the users tried to "automate more and more of the process to gather more information," as a high performing and evaluative team, they soon realized the need to define and prioritize the data necessary to make decisions.

Navigators frequently cited the use of B2B-Participant to make decisions. If the data on B2B shows that a participant has graduated in May, for example, the Navigator checks credentials and job status to strategically create a to-do list of how many new participants she needs to recruit to meet certain predefined goals. Echoing the navigators, the success of this process relies heavily on the quality and quantity of the data that the training providers share with the team.

B2B-Participant also helps training providers for recruitment. One partner mentioned that it would be helpful if B2B included data about where each participant is in the process and what needs to be done, which shows that other than the Pathways team, B2B-Participant can also be beneficial to some partners.

Project Hub

In addition to B2B Engage, the second major partner-client data management collaboration tool is called Project Hub. The team uses this platform for knowledge and project management internally and externally. Throughout the course of the project, the team continually optimized and streamlined their processes to all connect to this one data management platform. As one navigator explained, “eventually, it just became a phone call, a Google Doc, and the Project Hub that you could toggle to be able to modify that process”. Somewhat interestingly, most interviewed partners appeared unaware of this platform, though all project partners received login information at the beginning of the project. There had been some direct active external users, however some have dropped off after a while. Several reasons for this may be the large quantity of data and information stored on the site, or the frequency with which the Project Director produces high quality summaries of the information – making direct access to the information unnecessary.

Project Hub, while initially conceived for partner/client collaboration, instead served as a critical internal communication tool. The project manager found Project hub extremely helpful in communicating data and ensuring transparency,

> For me the biggest communication tool has been the Project Hub, a way to get information out and get information in, that two-way communication [...] if you see project hub, you see all that's out there. So, having that transparency was what was extremely important to me.

Examples of reports provided by the project manager to team members through this platform are as follows:

- Weekly participant outcomes data report to navigators,
- Status report, success story, finance report to New River/Mount Rogers (NRMR) Chief Local Elected Official Board and Workforce Development Board,
- Monthly and Quarterly Budget Reconciliation report to the fiscal operator

- Quarterly Leverage and Indirect Cost report to the fiscal operator
- Quarterly progress report (narrative) to the Department of Labor

Internal versus external communication

Above, we have presented an analysis of each communication strategy in terms of their effectiveness at internal versus external communication. We define internal communication as taking place between members of an organization by sending and receiving information to each other. It is exclusive to colleagues, coworkers, or anyone else that is a project team member. In the Pathways program, internal communication consists of a wide range of communication channels such as in-person meetings, phone/video calls, internal communications software, instant messaging, and newsletters. External communication, on the other hand is the transferring of information between an organization and another entity or entities outside the organization. People within the organization might still have access to the message, but it is intended for an external audience. In the Pathways' program, the messages/reports sent are crafted towards a specific audience with the goal of fulfilling business and client needs. When asked who receives the data, a Business Service Manager explained that it is "shared with partners in the center, business services team, with businesses if they request it. If they need wage data, or if they need to know what in demand occupations are - we share it with anyone who requests it". In the focus group, members shared that infographics have been helpful in communicating the data with grant recipients,

> "because they're grant recipients and it was important that they understand what I'm communicating and moving into that format, to help ease that understanding I think that was positive change".

One BSSs explained the benefit of sharing data with external partners:

> We share the same types of data with partners, moving towards the role of convener to share data with partners. That's from the state - pushing for sector strategies. Doing that to dig into what's happening data wise and employment wise and sharing that consistently with our partners. Right now it's internal to 12-13 folks in the business solutions team. Moving forward, we want to do a quarterly email newsletter to a wider group about trends in certain fields to get more of the data out there more widely.

Another BSS emphasized the importance of transparent communication for relationship sustainability:

> What a company needs today might not be a solution that you provide. If they ask you a problem that isn't what you do, and you build that trust, eventually they will ask you something that you do. It's all relationships, if you don't develop a relationship with company - nothing you ever do will be transformational, it will all be a transaction. Our goal is to have relationships that are transformational.

Effective communication strategies

Effective communication helps team members build strong relationships and positively contribute to the organization culture and overall success of programs. As the CIS shared with us "there's not one form of communication that works" for the team and "the strength of the communication has been, it's digital, it's email, phone calls and in-persons a combination of them." Below are several effective communication strategies the Pathways team adopted:

Using formal data management and collaboration tools

As mentioned in previous sections, Pathways staff take advantage of multiple tools and platforms to make internal communication within their team and external collaboration with partners and businesses more effective. Project Hub, B2B Engage, online Newsletter and podcasts are among these tools.

Regular "Face to Face" Meetings

Another communication strategy that has proved effective in improving communication and collaboration among Pathways' team is regular meetings. For teams with remote employees, video conference calls have offered a perfect solution for everyone to be able to meet face to face. Unlike audio calls, video conference calls let members actually see facial expressions and body language so everyone is able to fully understand how something is being communicated. Many Pathways' team members and partners noted the importance of face-to-face interactions; *"We like to do the meetings face-to-face. We will all be there together, nothing gets misconstrued, we get all the information all at one time" (BSSs*). Or as one partner put it:

> Lots of zoom, lots of team meetings. I think that's primarily the way I communicate. It is email/ phone calls right now, but I usually try to get out and about and meet with people face to face and participate in Business Services team meetings. And then I try to participate in any other kind of organization meetings in person if I can.

Giving Clear Instructions

One area where communication tends to fail is in how team leaders communicate instructions. Unclear communication can cause delays or completely stop a project. Clear instructions make it easy for teams to get things right the first time. Our survey results showed that all Pathways team members are well aware of their responsibilities. However, there is room for improvement when it comes to new team members. The team delivers instructions during in-person meetings or via email, project management tools, video chats and phone calls.

Creating an Open Environment

To open up the flow of communication, Pathways leaders ensure that team members feel comfortable enough coming to them when they have a problem, made a mistake or have a question. By making it clear to the team that they can reach out to the project manager/ supervisors for anything, whether in person or over a video call, they have made members feel comfortable and created an open environment of communication.

> When someone is criticizing myself as a project manager, it's about making efficiency, giving people the right tools to do their jobs. I think when we had that real strong navigator team, if they performed exceptionally well, it was because they all took the ownership of the project (Interview with the Project manager)

Impact of communication tools on outcomes

Effective communication has led to trust building between Pathways team and businesses in the region. Pathways team benefits from creatively using communication tools in broadening its footprint. In a focus group, one teammember talked about the podcast series:

> We've done some podcasts several times on the Pathways Project. I think we've got three or four out there, but around pathways and so those get shared. Our board members, both boards, all county administrators, everybody in economic development, all DSS directors, all management from the VEC, DARS that goes up to the stage. We just push it out. Does everybody listen? Probably not. But I think that that has broadened our reach quite a bit

In the same conversation members mentioned that,

> All four [Business Services Teams] of them have seen a dramatic uptick. Partner engagement in serving businesses, recognition from the effort of serving businesses, but certainly the number of businesses you can actually touch in reality certainly has shifted. And we should be able to see that with data. The business side CRM.

This said, not all communication efforts end up fruitful:

> Business Serving Partner: If you visit 10, companies, and you assist with their needs, how many did you follow through with? And it's not always our fault. A lot of times, it's companies that don't follow through

Businesses (and eventually job seekers) also benefit from regular communication with Pathways' team. During their business visits, the BSS inform employers who plan to expand or hire new employees about existing resources (e.g., Virginia Jobs Investment Program), *"i*

> Business Serving Partner: If they are hiring, let's say five people and invest in $100,000, then the Virginia jobs investment program will come along and give them so much for employees that they've hired 10 employees

Conclusion and Recommendations

The Pathways to the American Dream Program successfully transitioned 1,249 people into higher wage employment with an average starting salary almost double the regional average. The $77 million in household income, and $55 million in additional economic activity resulting from that employment does not include the monetary and social impact of long-term impacts of sector-strengthening relationships, direct services to businesses, and Credit for Prior Learning, among other things. We do know that the program had a positive impact on the individual and family through increased employment; a positive impact on business and industry through skilled employees; and a positive impact on the economy in terms of both business efficiency gains, and also the additional $77 million annually in household income.

Pathways achieved each of its six goals: 1) regional workforce strategies for sector partnerships exist in the Manufacturing, Healthcare, and Information Technology industries; 2) opportunities for un and underemployed adults to develop their skills and earn credentials in high-demand occupations increased; 3) education and training partners worked to close the gap between the skills needed by workers and the skills of the available workforce and project funds expanded the affordability of workforce training and credentialing; 4) The Prior Learning

Assessment system is operational, decreasing time to degree for experienced students; and 5) through evaluation capacity building and fostering a culture of learning and improvement, provide research and best practices so Virginia legislators can adopt policies for creating, sustaining, and scaling sector partnerships to generate innovative programming.

To achieve these goals and outcomes, Pathways focused on three areas: staffing, partnerships, and communication. Using a participatory evaluation approach over a four year period, coupled with document analysis, surveys, interviews, and secondary economic data, the evaluation team uncovered the elements of these core strategies that contributed most to their success. By paying attention to both the anticipated and unanticipated outcomes of these strategies, and presenting the positives and negatives of each, we hope that other similar or emerging programs can learn from what works and does not in our context.

In staffing, we find the following unique roles critical: Curriculum and instructional specialist, business services specialist/coordinator, Navigator, and Data Analyst (while the Project Director was similarly critical, in the way that they shared information and cultivated team efficiency, this role is not "unique" in this type of project). Especially unique is the CIS, whose different array of services for each of the three sectors illustrates the importance of targeted high-touch strategy. In addition to their unique and specific focus, the Pathways staff were especially effective due to their strong team efficiency. In the area of partnerships, we find differences in the way that participant-serving partners and business-serving partners interact with staff and data systems. Common elements of successful relationships with both partner types include frequent one-on-one and team interactions, discussion of common goals and shared interests, and open discussions framed by evaluative thinking. Barriers include frequent staff turnover, historical conflict between institutions, and a mismatch in participant or business outcome-based goals. Finally, informal and formal communication tools and strategies were essential, and the team found value in shared data management systems, shared working documents, the Project Hub repository, but most especially joint meetings where data, outcomes, and goals were shared.

Appendices

Appendix A – List of Jobs by 2018 SOC

Manufacturing

SOC	Description
17-2112	Industrial Engineers
17-2141	Mechanical Engineers
17-3023	Electrical and Electronic Engineering Technologists and Technicians
17-3027	Mechanical Engineering Technologists and Technicians
17-3029	Engineering Technicians, Except Drafters, All Other
19-4031	Chemical Technicians
49-3023	Automotive Service Technicians and Mechanics
49-9041	Industrial Machinery Mechanics
49-9043	Maintenance Workers, Machinery
51-4041	Machinists
51-4121	Welders, Cutters, Solderers, and Brazers
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

Healthcare

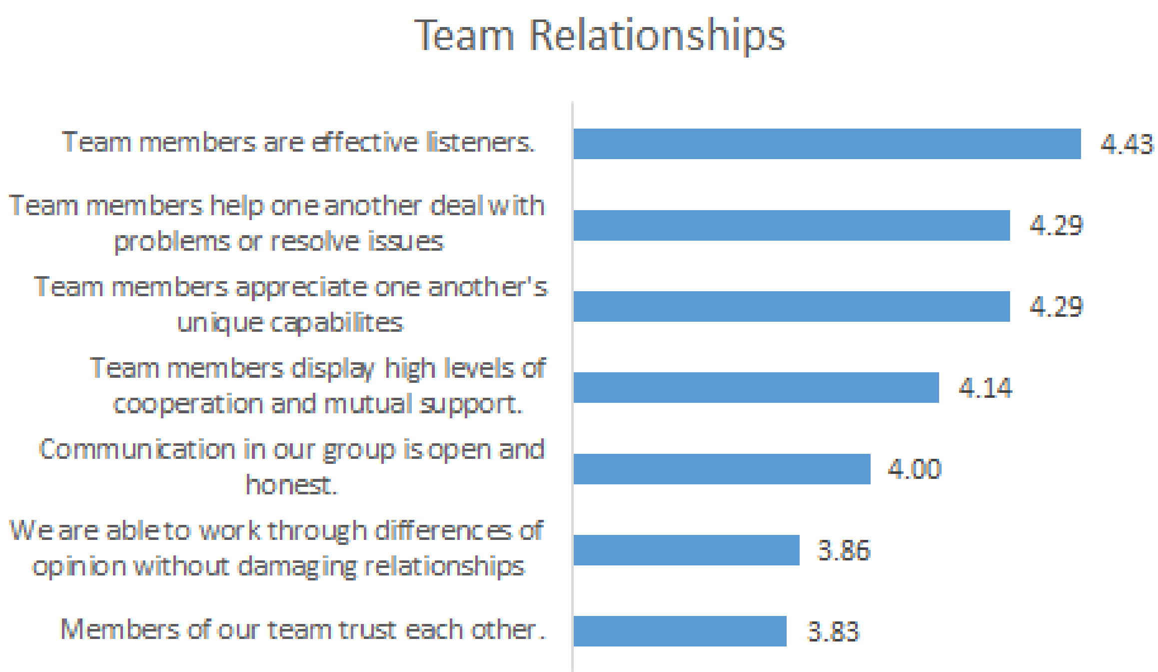
SOC	Description

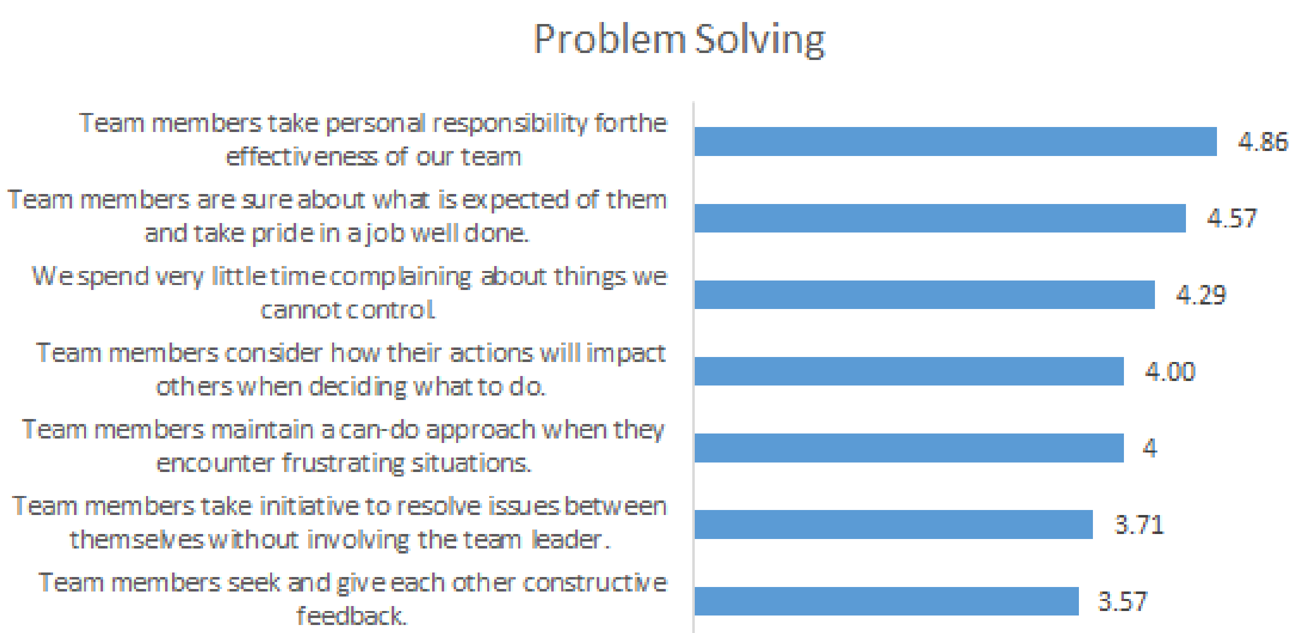
29-1071	Physician Assistants
29-1122	Occupational Therapists
29-1126	Respiratory Therapists
29-1141	Registered Nurses
29-1292	Dental Hygienists
29-2011	Medical and Clinical Laboratory Technologists
29-2012	Medical and Clinical Laboratory Technicians
29-2032	Diagnostic Medical Sonographers
29-2034	Radiologic Technologists and Technicians
29-2042	Emergency Medical Technicians
29-2043	Paramedics
29-2055	Surgical Technologists
29-2061	Licensed Practical and Licensed Vocational Nurses
29-2072	Medical Records Specialists
29-9021	Health Information Technologists and Medical Registrars
31-1131	Nursing Assistants
31-2021	Physical Therapist Assistants
31-9091	Dental Assistants
31-9092	Medical Assistants
31-9094	Medical Transcriptionists
31-9097	Phlebotomists

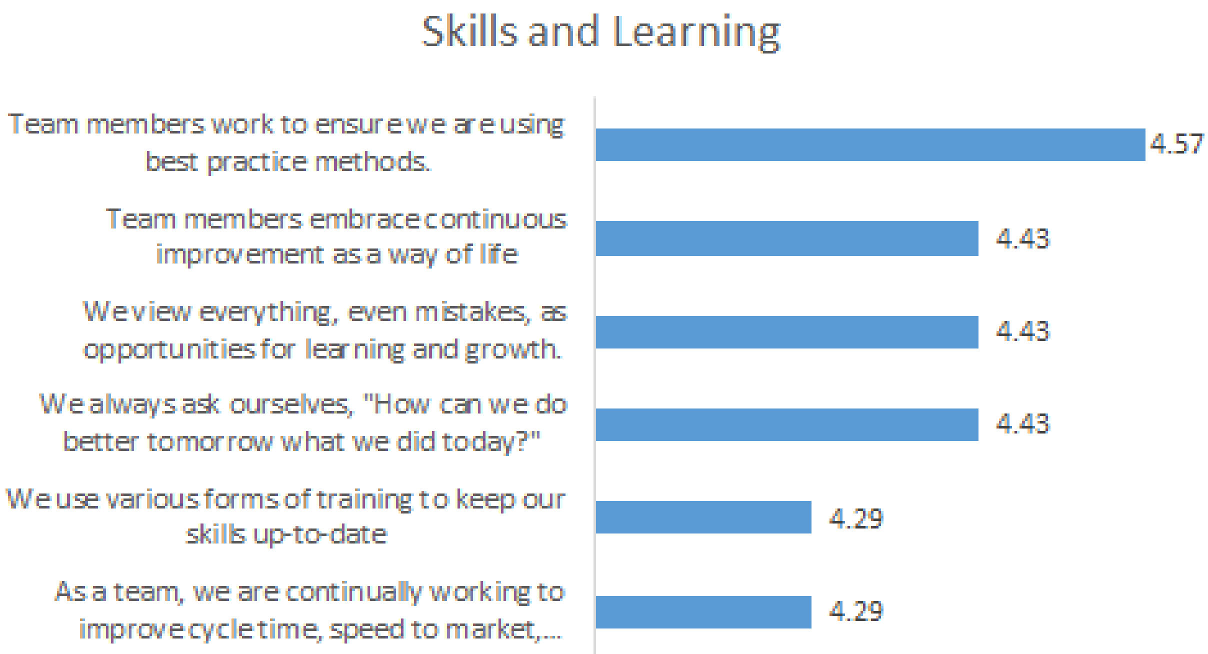
Information Technology

SOC	Description
15-1211	Computer Systems Analysts
15-1231	Computer Network Support Specialists
15-1232	Computer User Support Specialists
15-1244	Network and Computer Systems Administrators
15-1251	Computer Programmers
15-1252	Software Developers
15-1253	Software Quality Assurance Analysts and Testers

Appendix B - Results of the Team Cohesion Staffing Survey


Team Relationships
Team members are effective listeners.
4.43
Team members help one another deal with problems or resolve issues
4.29
Team members appreciate one another's unique capabilites
4.29
Team members display high levels of cooperation and mutual support.
4.14
Communication in our group is open and honest.
4.00
We are able to work through differences of opinion without damaging relationships
3.86
Members of our team trust each other.
3.83


Problem Solving
Team members take personal responsibility for the effectiveness of our team
4.86
Team members are sure about what is expected of them and take pride in a job well done.
4.57
We spend very little time complaining about things we cannot control.
4.29
Team members consider how their actions will impact others when deciding what to do.
4.00
Team members maintain a can-do approach when they encounter frustrating situations.
4
Team members take initiative to resolve issues between themselves without involving the team leader.
3.71
Team members seek and give each other constructive feedback.
3.57


Skills and Learning
Team members work to ensure we are using best practice methods.
4.57
Team members embrace continuous improvement as a way of life
4.43
We view everything, even mistakes, as opportunities for learning and growth.
4.43
We always ask ourselves, "How can we do better tomorrow what we did today?"
4.43
We use various forms of training to keep our skills up-to-date
4.29
As a team, we are continually working to improve cycle time, speed to market,...
4.29

Appendix C: Key Partners

Figure 7 shows businesses that have engaged at least five times or more according to the Quarterly Narrative Reports. The top most mentioned business is GE, followed by Volvo, GenEdge, and Spectrum.

Table 5: Partners by Frequency in QNR

Partner	Type	Frequency*
Community Colleges/Training partners	Participant-serving	66
Council for Adult and Experiential Learning (CAEL)	Project Partner	27
Virginia Community College System (VCCS)	Project Partner	27
Southwest Virginia Advanced Manufacturing (SVAM) Center of Excellence	Participant-serving/Business-serving	24
Lord Fairfax Community College (LFCC)	Project Partner (Online portal development)	16
Virginia Tech Centre for Economic and Community Engagement (CECE) – Formerly Office of Economic Development (OED)	Project Partner	12

*Number of times mentioned in QNR

Table 6: Businesses by Frequency in Quarterly Narrative Reports (Y1Q1 - Y2Q4)

Partner	**Frequency***
GE	135
Volvo	13
GenEdge	11
Spectrum	10
Blue Ridge Fiberboard	9
People, Inc.	9
American Merchant	8
Mayville Engineering Company (MEC)	7
Phoenix Packaging	7
Nilit	6
Starsprings	6
Arconic	5
Hollingsworth & Vose	5
Monogram Foods	5
New River Computing	5

*Number of times mentioned in QNR

Figure 10 -Businesses by Frequency in QNR

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