THE UNIVERSITY OF RHODE ISLAND

REAL JOBS RHODE ISLAND CASE STUDY:

Partnership for Real IT Jobs

Prepared for:

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Partnership for Real IT Jobs

Real Jobs Rhode Island (RJRI)

In 2015, The Rhode Island Department of Labor and Training (DLT) awarded funding to workforce development collaborations throughout the state. Funding was provided through development grants to create sector-based partnerships and create a plan to provide workforce training aimed at sector needs. Implementation funding was then provided for these partnerships to develop training materials and train workers in Rhode Island in targeted industries including healthcare, technology, marine trades, and the arts. Sector partnerships were developed through public private partnerships that included industry, workforce intermediaries, and educational institutions to address the economic needs of the state.

I. Sector Need

The Partnership for Real IT Jobs (PRITJ) was formed to support the growth of technology talent in Rhode Island. Specifically, it sought to address the following needs:

- Rhode Island faces a shortage of information technology employees.
- According to a survey conducted by Tech Collective (TC), only 65% of employers reported their IT talent base was "adequate" for filling positions. TC also found that these employers reported it difficult to fill positions in the IT sector, especially positions related to software development, business analysis, programming, and web design.
- When companies traditionally recruit, they often seek job candidates with college-level degrees and work experience, even though they are not always the credentials that are needed for the jobs, leading to expensive recruitment processes for companies.

II. Grant History

Opportunity@Work is a Washington D.C. based non-profit that seeks to help communities implement TechHire initiatives. TechHire is a 2015 federal initiative to streamline the technology industry and focus it on skills-based labor, and Rhode Island has been involved in implementing this initiative as the nation's first TechHire state. In an effort to help Rhode Island implement TechHire strategies, Opportunity@Work worked to unite LaunchCode, a 501(c)(3) nonprofit organization founded in St. Louis, MO, to grow new technology talent and TC, a Rhode Island-based technology industry workforce intermediary, in a RJRI partnership focused on unifying and streamlining the technology industry. As an out of state entity, LaunchCode did not have experience with the DLT or grants through the Rhode Island state government, but its other partners, especially Opportunity@Work and TC, were both familiar with grants in Rhode Island.

III. Goals and Objectives

The original objective of the Partnership for Real IT jobs was to create a support system to introduce new technology talent to employers in Rhode Island. In pursuit of this objective, the PRITJ sought to meet the following goals:

1. Place 250 technology apprentices with at least 100 companies over three years.
    - Specifically, the PRITJ sought to place forty apprentices in year one, ninety in year two, and 120 in year three.
2. Convert at least eighty percent of apprentices to full-time employees.
3. Partner with fifty companies in year one and at least 100 companies by the end of year three.

The PRITJ later modified its training program so that it was less focused on the delivery of an apprenticeship program and focused part of its program on the delivery of "bootcamp" training. Its goals included:

1. Recruit 595 participants to complete an online skills assessment through LaunchCode's website.
2. Recruit and deliver training to 100 participants in CS-50x boot camp training.
3. Place forty participants into 90-day IT apprenticeships.

IV. Partnership

It was clear to the PRITJ that training programs were needed in Rhode Island because many potential employees possess strong skills but lack the necessary credentials to be placed with local companies. Tech Collective and Opportunity@Work were already familiar with the work of LaunchCode in other states (like Missouri and Florida) and they thought the framework delivered by LaunchCode elsewhere would be beneficial if executed in Rhode Island. The DLT was perhaps the most important participant in uniting the PRITJ, as it brought all of the partners together at a technical assistance meeting where the program and reporting requirements were outlined. It was at this meeting that different partners exchanged information and ideas for future collaboration.

Table 1: Partnership Members and Responsibilities

LaunchCode	Lead Applicant: Responsible for assisting Tech Collective in creating apprenticeship opportunities with industry employer partners; creating and running an application process for these apprenticeships; helping to place applicants in apprenticeships; engaging in program recruitment through digital marketing; conducting outreach to education providers; attending networking events; working with local organizations; offering its CS50x program to interested participants.
Opportunity@Work	Responsible for referred registrants on the national TechHire.org website to LaunchCode as a preferred provider to technology apprenticeship opportunities; referring eligible candidates to LaunchCode's apprenticeship program; acting as the main liaison between the partnership and the DLT.
Tech Collective	Responsible for creating apprenticeship opportunities with employer partners; referring graduates of its coding bootcamp to LaunchCode's online application for apprenticeship opportunities.
SENEDIA	Responsible for training and certifying cybersecurity talent; referring graduates of its fast-track computer programming education program to LaunchCode's online application for apprenticeship opportunities.
Amica, Atrion, Citizen's Bank, CVS, Purvis Systems, ShapeUp, OpenWorks Group	Responsible for acting as an apprenticeship training site for program participants.

V. Implementation Activities and Processes

LaunchCode initially sought to pursue a goal of placing 250 apprentices with companies through a five part implementation plan. That plan later changed so that the PRITJ sought to have 595 participants complete an online skills assessments, enroll 100 participants in a CS50x bootcamp, and place 40 apprentices with Rhode Island technology companies. To advance these efforts, the PRITJ set out to build a pipeline of candidates to the apprenticeship program, work with education and training partners to deliver fast-track education programs to the community, evaluate and verify candidate skills prior to apprenticeship placement, recruit and engage employer partners, and place apprentices with its employer partners.

Building a pipeline of candidates to the apprenticeship program.

LaunchCode planned to hire a Candidate Recruitment Manager to recruit candidates through digital marketing, participate in community outreach to education providers, attend meetup events and networking events, and form partnerships with local organizations, such as the Providence Public Library, to supply the necessary credentials to under-qualified job applicants to make them employable. The PRITJ was specifically interested in recruiting from local colleges and universities, as well as local veteran's organizations, but its recruitment population reflected a wide range of participants from both targeted and non-targeted populations. Those involved in the PRITJ, as well as online education providers, were asked to refer their own graduates to LaunchCode's online application so that they were aware of apprenticeship opportunities.

Working with education and training partners to deliver fast-track education programs to the community.

The PRITJ also planned to work with IT education providers and the higher education community to identify candidates for the apprenticeship program. In addition to the programs that were already being offered by SENEDIA and Tech Collective, LaunchCode offered CS-50x bootcamp training, which combined a free online programming course offered by Harvard with in-person class sessions, mentorship, and group projects. The bootcamp training was a sixteen week program that met twice a week from 5:30pm-8:30pm at the University of Rhode Island's Providence Campus. In addition to offering the CS-50x training to a planned 100 participants, the PRITJ planned to form relationships with higher education institutions so it would have feedback about best practices for student selection and to share information about the skills that IT employers are seeking.

Evaluating and verifying candidate skills prior to apprenticeship placement.

LaunchCode assesses the skills of prospective employees through a two-part evaluation process prior to placing prospective apprentices with companies. The first part of its evaluation occurred through its website, where it allowed participants to complete a coding test, aptitude test, and an open-ended questionnaire that measured past work experience and motivation in

computer programming. Candidates who did not score high enough on this initial test were directed to other services where they could pursue educational opportunities that could help them score higher if they decided to re-apply (e.g., SENEDIA's cybersecurity training, Tech Collective's computer programming courses, the Providence Public Library's Rhode Coders program, and other online platforms). The candidates who passed the initial stage of the evaluation process took part in a Skype interview where their coding knowledge and soft skills were assessed. Candidates who needed improvement on their interview skills were provided with career coaching and then encouraged to interview with employers for apprenticeships when they were prepared for the interview. Candidates passing the Skype interview were paired with companies to complete 90-day apprenticeships.

Recruiting and engaging employer partners.

To recruit and engage industry employers, LaunchCode planned to directly recruit IT companies through its Company Relations Manager. This Manager would explain LaunchCode's apprenticeship model to the companies, help them identify barriers to hiring new employees, encourage companies to register open positions in its database to help match their companies with apprentices, and help to minimize the perception of risk that comes with hiring new employees by allowing companies to test new hires through the apprenticeship program.

Placing apprentices with employer partners.

The PRITJ planned to place forty participants into ninety day apprenticeships in the IT sector. LaunchCode's Company Relations Manager identified candidates who were screened through both phases of the interview process and arranged for them to interview with companies that were hiring. The PRITJ envisioned placing candidates into personalized apprenticeships where participants were able to learn skills that addressed common industry skills gaps. Ideally, apprentices would learn to program in languages used by the company, effectively use the company's software, learn company specific technologies, practice planning and organizing skills, engage in problem solving, and develop soft skills. Once an apprentice was placed with a company, the Company Relations Manager solicited feedback from both the company and the apprentice to address any additional needs that arose.

VI. Achievements

Partnerships

Forming community relationships

The PRITJ was able to form a relationship with the Providence Public Library which started a coding club called Rhode Coders to help new programmers get into the field. This program changed its curriculum to better address the needs of potential program applicants, and broadened awareness of the program in the community.

Making strong industry connections

The PRITJ formed relationships with companies that hired multiple apprentices. These relationships were valuable to the strength of the program and helped show the value of the program's outcomes

Recruitment

Use of networking events

Recruiting was improved by attending meet-up events and other networking events where people meet to code together in their free time.

Trainee Barriers

Transportation

Classes were held in downtown Providence, and the PRITJ was concerned that transportation would pose a barrier to participants who lived outside the city. This challenge was easily overcome, however, by the PRITJ providing participants with bus passes using grant funds.

Training

Achieving recruitment goals

The PRITJ successfully enrolled over 100 candidates into the CS-50x bootcamp training (109 officially enrolled), with 26 participants completing the training and earning certificates. However, only five of those 26 that completed the training program enrolled in an apprenticeship, and only four completed their internship. A high number of those earning certificates were placed in an apprenticeship program.

Transition from Training to Employment

The PRITJ did not discuss achievements related to the transition from training to employment.

VII. Challenges

Partnerships

Working in a competitive industry

One of the challenges of partnering with other organizations in the highly competitive technology industry is knowing the right amount of competition and collaboration to tolerate. During the initial phases of program development, Launch Code felt other companies were wary about the PRITJ's training because the companies viewed it as a threat to themselves. Further, Launch Code perceived the Rhode Island technology industry as having a "survival of the fittest" attitude. Launch Code was worried that this competitive atmosphere hurt the collaborative environment, but conversations with DLT helped the partners overcome some of their ultra-competitive tendencies.

Unclear partnership leadership

Because LaunchCode, Opportunity@Work, and TC all had influence over the direction of the partnership, partnership leadership was unclear and inconsistent. Further, there was a lack of effective communication between the partnership leadership that caused confusion over partnership direction and program implementation. The lack of communication and unclear leadership between the lead organizations impacted the partnership's industry partners, who were unsure who to approach with problems or who had authority to make decisions.

Recruitment

Gap between program goals and program applications/completion

The PRITJ expected to receive interest from 595 participants interested in completing the online skills assessment but only received 470 applications. Several participants also began the skills assessment but did not finish it. Further, the PRITJ had a targeted recruitment number of forty participants to take part in the apprenticeship program, yet only five enrolled and four completed the apprenticeship program. This was due to the PRITJ's challenge of receiving commitments from employers to take on apprentices that were identified through the online coding assessment and skype interview process.

Trainee Barriers

Lack of proper equipment

Some participants lacked the proper equipment, like a computer or a laptop, to take part in the training. One way that this barrier was overcome was by reaching out to URI to loan computers out to students.

Difficult application process

Getting into the program was harder than participants thought, and many were not able to pass the first stages of the application process. The PRITJ does not view this as necessarily a bad thing because employers demand highly skilled coders, and a strict application process ensures participants have adequate skills.

Training

Having a non-Rhode Island-based lead organization

There were some challenges with offering training programs as an organization that came from out of state. The organization was heavily reliant on local organizations to advise it on what to expect in terms of outcomes and it might have changed how the timeline was structured based on its current experience. A lot of these challenges were overcome by having a healthy dialogue with DLT and utilizing its assistance.

Lack of industry support for apprenticeships

The Rhode Island technology industry was not used to utilizing apprentices in its workforce pipeline, and as a result did not understand the apprenticeship model the PRITJ hoped to utilize. Further, industry companies had little interest in taking on apprenticeships, and were highly reluctant to pay the $5,000 placement fee for taking on an apprentice. This lack of interest and support resulted in the PRITJ only placing four apprentices with technology companies instead of the planned 40.

Apprenticeship model incompatible with state government hiring regulations

Since private sector technology employers were reluctant to participate in the apprenticeship program, the PRITJ worked with the DLT to place apprentices in state technology positions. However, existing labor laws and hiring procedures were incompatible with the apprenticeship model, and prevented the PRITJ from placing apprentices in state positions.

Impostor syndrome and lack of soft skills

Many program participants lacked soft skills and had "imposter syndrome" (i.e., thinking they are not good enough for a position or will be discovered to be a fraud even when they are high-achieving). One way the PRITJ is seeking to overcome this challenge is by developing a mentor program that allows them to build confidence by building strong projects with a professional in the field.

High rates of dropouts

One of the key challenges were the high number of people dropping out of the CS-50x program. The PRITJ successfully recruited 109 participants into the program, yet only 26 participants completed the training. While recruitment was successful because of a strong recruiting and social media campaign, many of the participants dropped out of the program due to the rigor of the program and the fact that the program lacked a support structure for candidates lacking the necessary skills for the training.

<u>Transition from Training to Employment</u>

Receiving commitments from Rhode Island employers

The biggest challenge faced by the partnership was receiving commitments from employers to take on apprentices. The LaunchCode model identified candidates to pair with companies and paid those candidates $15 per hour during the apprenticeship period, but when those candidates are placed into positions companies are required to commit to paying a $5,000 placement fee. While there was support for programs like this elsewhere in the country, there was not similar enthusiasm for the model in Rhode Island.

<u>Other</u>

Lack of Flexibility

Launchcode is a national organization with a fixed model for their work in the technology

industry. The organization was highly reluctant to change their model to fit Rhode Island's unique economic environment, and could not easily adjust to their inability to implement the apprenticeship program. This lack of flexibility was further compounded by the fact that LaunchCode representatives working in the PRITJ on behalf of LaunchCode were reluctant to modify their organization's model without authorization from the organizational hierarchy.

Table 3: Performance Metrics for All Training Programs

IG-25 Partnership for Real IT Jobs (LaunchCode)	Start Date of First Cohort	Proposed End Date for All Cohorts	Target Enrollment	Enrolled	Target Completed	Completed
Recruitment, Training, and Employment						
CS50x Training - Cohort 1 (Job Seekers)	5/9/16	9/15/16	100	109	65	26
Apprenticeships (Job Seekers)	1/7/16	3/10/17	40	5	40	4
Total Employed after apprenticeships					40	4

VIII. Sustainability

As part of LaunchCode's plan for sustainability, it expected to be fully sustainable by the fourth year of operation and without funding from the DLT. The PRITJ planned to use the $5,000 conversion fee (for apprentices that are placed into full-time jobs) fund its operation. Given this fee is not compatible with most employers in Rhode Island, the PRITJ's sustainability is unclear. However, LaunchCode intends to keep operating in Rhode Island without DLT funding.

IX. Lessons Learned

The following lessons were learned by the PRITJ in executing its training program:

- Executing a program in a new state can pose unexpected challenges for meeting goals.
- Creating more conservative performance benchmarks or beginning trainings earlier in the year might increase awareness of the training program in the broader community.

X. Best Practices

These best practices were utilized by the PRITJ:

- Provide public transportation passes to trainees needing transportation assistance.
- Provide necessary materials, like laptops, for trainees in need.
- Giving participants a chance to receive individualized training and on-the-job experience makes it easier to gain post-training employment.

XI. Recommendations

Based on the successes and challenges of the PRITJ, the following recommendations are suggested:

- Follow-up with participants who dropped out of the program to learn why they left and develop solutions to mitigate participant drop out.
- Add a module to teach technically skilled but soft-skill deficient participants the basic soft skills needed in the industry workforce.
- Include the cost of providing transportation and materials assistance to participants into the original proposal budget.