

THE
UNIVERSITY
OF RHODE ISLAND

REAL JOBS RHODE ISLAND CASE STUDY: Phoenix Partnership

Prepared for:

Rhode Island Department of Labor and Training

Center General Complex
1511 Pontiac Avenue,
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APRIL 2018 REPORT

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Phoenix Partnership

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 including that included industry, workforce intermediaries and educational institutions to address the economic needs of the state.

I. Sector Need

The Phoenix Partnership, led by Hyman Brickle & Son, Inc., was designed to strengthen the Rhode Island economy through the development and implementation of a training program that addresses the core issues currently facing Rhode Island manufacturers. The Phoenix Partnership sought to address several issues within this sector including:

- Manufacturing companies have open positions but often find it difficult to identify qualified employees.
 - Three million manufacturing jobs over the next decade across the United States will likely need to be filled. The current skills gap is suggested to result in two million vacant jobs nationwide.¹
 - Candidates are often underqualified, not workforce-ready, lack necessary basic skills, lack any hands-on experience, have difficulties in handling the demands of a direct labor job, and do not understand the industry.
- Manufacturing appears to have strong growth potential in the United States.
 - Nearly 25% of manufacturing companies project growth of more than 10% in the next five years. 50 percent of companies plan to increase U.S. based production jobs by at least 5% in the next five years.²
 - Manufacturers report the most significant business impact of the talent shortage is their inability to meet customer demand.¹

Recognizing these sector issues, the Phoenix Partnership received an RJRI planning grant and worked to identify the skills gaps and issues in the Rhode Island manufacturing industry. The Phoenix Partnership surveyed manufacturing companies to understand training priorities, worked with the Rhode Island Manufacturing Association (RIMA) to better understand broad

¹ The Manufacturing Institute & Deloitte (2015). The Skills Gap in US Manufacturing; 2015 and Beyond. Web, 20 Sept. 2015.

² National Association of Manufacturers (2014), Overcoming the Manufacturing Skills Gap: A Guide for Building Workforce Ready Talent in Your Community. Web, 20 Sept. 2015.

industry needs, and organized a series of planning meetings among employer partners to discuss training needs. The training priorities identified through these efforts included:

- The need to address individual and structural barriers to providing training, such as:
 - Excessive turnover of new employees due to a lack of manufacturing knowledge.
 - Long recruiting time for new employees due to a lack of readily available qualified candidates.
 - Lack of an assessment tool to identify critical skills gaps.
 - An aging workforce and few new employees to fill open positions following retirements (i.e., lack of an employment pipeline).
 - Barriers (e.g., transportation, childcare) and excessive costs of sending employees to training programs.
 - Lack of internal and external trainers available to provide training.
 - Lack of a consistent training curriculum that can be utilized by all manufacturers.
 - Lack of accessible public transportation for new employees.
 - Having many employees who speak English as a Second Language.
 - Lack of formal career development plans for individual employees.
- The need to train for specific skills in incumbent workers:
 - Knowledge and utilization of “Lean Manufacturing,” including the Lean philosophy and Lean tools.
 - Leadership, communication, and coaching skills (critical to advancement).
 - Computer literacy.

Based on these identified needs, the partnership worked to train newly hired and incumbent manufacturing workers in Lean Manufacturing, which is a program for continuous improvement that helps to improve productivity by reducing waste, reducing product defects, and empowering employees. The training program was designed to decrease turnover and increase productivity in the manufacturing sector within Rhode Island.

II. Grant History

Prior to receiving the RJRI planning grant, Hyman Brickle & Son, Inc. had received DLT funding through the Incumbent Worker program, which is training program designed to provide employees with training on a specific skill or competency, and requires a 50% match from the company for every aspect of the training. The training provided by the Phoenix Partnership through the RJRI grant was designed to provide current employees with a broader base of knowledge about manufacturing. The different organizations involved in the Phoenix Partnership had never worked together prior to applying for and receiving the RJRI planning grant. The group of partners came together after the President of Hyman Brickle & Son suggested to one of the staff members that they put together a grant for the RJRI program. The RJRI grant seemed particularly promising to them because they heard that if they were approved and funded for the program that it would be much easier to get approved for future grants. They

recruited companies to take part by examining lists of companies and asking those with whom they had prior relationships if they wanted to join in the effort. Ideally, they wanted to include manufacturing companies across the state. They also worked with the New England Employer's Association to learn more about companies to include in the initiative. Once they had selected the initial group, they organized bi-weekly meetings to discuss the grant plans, first for the planning grant, and eventually for the implementation grant. The meetings were held at different locations each time, and often they met at the RIMA headquarters due to its central location.

III. Goals and Objectives

The partnership was developed to address the insufficient capacity in the region to meet the current and projected workforce needs in the manufacturing industry. The Partnership worked to train newly hired and incumbent workers to meet the demands of their workplaces and to prepare them for advancement within their companies by increasing their knowledge and utilization of Lean Manufacturing. Lean Manufacturing is a program for continuous improvement that helps to increase workplace productivity by reducing waste, reducing product defects, and empowering employees. Though employers are often at different stages regarding implementation, Lean Manufacturing is viewed as a best practice within the manufacturing field, so generally employers understand the value of training employees on Lean practices.

The goal for the Phoenix Partnership was to develop the Manufacturing Center of Excellence (MCE), which would be the umbrella organization encompassing all training programs and courses. The MCE would be a resource for companies and workers to develop innovative training solutions to support industry growth and best practices and ensure that recent hires and incumbent employees are equipped to meet the needs of RI manufacturers. This center would assist regional employers in filling more positions, sustaining employment, and increasing internal career advancement.

The Phoenix Partnership worked to meet the following goal:

1. Design and implement a training program to address three different levels of skill sets (basic, intermediate, advanced) that cover gaps in manufacturing knowledge and competencies.

Specifically, the Phoenix Partnership sought to meet the following objective:

- Provide 40 participants with the contents of the training program and additional support services (e.g., childcare, transportation) as needed.

IV. Partnerships

The Phoenix Partnership brought together a variety of industry employers within the manufacturing sector as well as other partners to help with referrals, training content, and industry expertise. The chart below details the partners and their specific responsibilities.

Table 1: Partnership Members and Responsibilities

<p>Hyman Brickle & Son, Inc.</p>	<p>Lead Applicant: Responsible for leading training efforts; coordinating partners to design and implement the three-level training program; ensuring the curriculum was developed in a manner that is consistent with the needs of all employer partners, employees, and the industry at large.</p>
<p>Aspen Aerogels, Bouckaert Industrial Textiles, Becker Manufacturing Company, Vibco, Inc.</p>	<p>Responsible for identifying employees for participation in the training series; providing insight into training needs at their respective organization; overseeing participant management of their own employees; conducting post-training and on-the-job evaluations (designed by the Phoenix Partnership) in order to monitor how the training impacted worker performance in practice.</p>
<p>Rhode Island Manufacturing Association</p>	<p>Responsible for spreading the word of the training program to other manufacturing employees; working to be the administrative home for the Manufacturing Center of Excellence.</p>
<p>Polaris MEP</p>	<p>Responsible for developing training program based on training needs; providing instruction for program series (Module 1).</p>
<p>New England Institute of Technology (NEIT)</p>	<p>Responsible for developing training program based on training needs; providing instruction for program series (Module 2-5); providing training space for Manufacturing Essentials series; conducting site visits to the partners' manufacturing facilities.</p>
<p>Employers Association of the Northeast</p>	<p>Responsible for providing industry outreach and expertise regarding the training program for incumbent workers that would benefit companies; assisting with employee career growth.</p>

V. Implementation Activities and Processes

The partnership hired a facilitator to help write the grant proposal and run the industry partner meetings. The content for the specific training modules was initially outlined by the industry partners for the Phoenix Partnership during its meetings and was based on industry experience as well as an audit of best practices in manufacturing training courses. Five different companies (Hyman, Brickel, & Son, Inc., Aspen Aerogels, Bouckaert Industrial Textiles, Becker Manufacturing Company, and Vibco, Inc) participated in the development of the trainings. After the initial outline was created, the specific curriculum development for incumbent workers was completed by the training partners, Polaris MEP and the New England Institute of Technology. The University of Rhode Island (URI) Office of Strategic Initiatives conducted the evaluation for the Phoenix Partnership, in which URI staff member helped design the surveys and analyzed the results.

Goal # 1: Design and implement a training program to addresses three different levels of skills sets (basic, intermediate, advanced) that cover gaps in manufacturing knowledge and competencies.

Recruitment & Pre-Screening

The five employers within the partnership referred their own employees to the training series. Employers (supervisors and managers) were responsible for screening and selecting the employees for the training series. Each employer partner signed an “Employer Commitment Letter” that stated its commitment to enable employees to attend the training during work hours.

Training Series

As the first step for the MCE, Year 1 of the RJRI grant focused on the development and implementation of a training series called “Manufacturing Essentials.” The Manufacturing Essentials training included a series of five classes: 1) Introduction to Lean Manufacturing, 2) Safety Practices and Procedures, 3) 5 S (Sorting, Setting in Order, Shining, Standardizing, and Sustaining), 4) Quality, Reducing Errors/Defects, and 5) Standard Operating Procedures and Productivity. This was 10-week training that met for four hours once a week from 8:00am-12:00pm at NEIT located in East Greenwich. Costs for curriculum development and any materials and supplies needed for participants were paid for through the RJRI grant. Through the RJRI grant, the Phoenix Partnership also paid for employee time at a rate of \$12/hour for eight hours to attend the Manufacturing Essentials training.

Table 2. Training Module Overview

Module	Skills and Abilities Gained
<p>1) Manufacturing Essentials: Lean 101 Polaris MEP</p>	<ul style="list-style-type: none"> ● Correctly identify eight types of wastes experienced within the industry. ● Identify, diagnose, implement and document using Lean tools to strategically grow business through continuous improvement. ● Understand how to contribute to a Lean Journey within an organization to create a foundation capable of supporting advanced tools such as cellular manufacturing, pull production strategies and visual factory.
<p>2) Manufacturing Essentials: Safety Practices and Procedures New England Institute of Technology</p>	<ul style="list-style-type: none"> ● Correctly identify personal protective equipment based on hazard analysis. ● Identify the impact of ergonomics on workplace safety. ● Demonstrate comprehension and use of Material Safety Data Sheets (MSDS). ● Identify and implement basic lockout/tagout needs and procedures. ● Identify the various components of Behavior Based Safety.
<p>3) Manufacturing Essentials: 5 S New England Institute of Technology</p>	<ul style="list-style-type: none"> ● Identify and implement five levels of Sorting. ● Identify and implement five levels of Setting in Order. ● Identify and implement five levels of Shining. ● Identify and implement five levels of Standardizing. ● Identify and implement five levels of Sustaining.
<p>4) Manufacturing Essentials: Quality, Reduction of Error/Defects New England Institute of Technology</p>	<ul style="list-style-type: none"> ● Differentiate between Building Quality vs. Inspecting Quality. ● Demonstrate an understanding of variation (E.g., Funnels, X&R Charts).

	<ul style="list-style-type: none">● Use of necessary tools (Ex. scales, tape measures, calipers).● Demonstrate comprehension of quality requirements (Ex. reading and understanding a document or blueprint).
5) Manufacturing Essentials: Standard Operating Procedures & Productivity New England Institute of Technology	<ul style="list-style-type: none">● Demonstrate understanding of, and ability to execute, Standard Operating Procedures.● Show comprehension of Operating Equipment Effectiveness (OEE).● Predict how actions and strategies in OEE impact the bottom line.● Use an Hour by Hour Chart.● Demonstrate comprehension of why Standard Operating Procedures matter in ensuring predictable results.

The first class (Manufacturing Essentials: Lean 101) was provided by Polaris MEP at the NEIT location; classes 2-5 were provided by NEIT. The lesson plans were designed to provide hands-on training and to specifically relate to the work environment. The companies wanted the training to be interactive and engaging and included homework the trainees could bring back to the workplace. For example, during the 5 S class, training participants would take before and after pictures of their workspaces to demonstrate the organizational learning objectives. Participants had to complete all modules in order to graduate and could miss only one class during the course of the training series. In addition to post-module testing through the training provider and student evaluations of the course modules, each employee who completed a module was evaluated (on the job) by their employer, using a standard evaluation created by the partnership, to ensure the evaluation was consistent throughout the industry.

The Phoenix Partnership initially planned to run two cohorts through the Manufacturing Essential training series simultaneously, but decided this was not sufficient to maintain the appropriate threshold of employees needed to ensure productivity at the companies. Therefore, it held one cohort of 20 training participants at a time. The partnership wanted each training to include no more and no fewer than 20 participants.

During the first implementation year of the grant, the Phoenix Partnership developed a plan for the two additional training series, the Manufacturing Development Series and the Advanced Manufacturing Series, which would be rolled out over the next couple of years. The plan for these intermediate- and advanced-level trainings was to offer employers more in-depth training for their employees to meet their developing workforce needs. The idea of these trainings would be that once employees have successfully completed the Manufacturing Essentials series, intermediate and advanced courses could be taken “a la carte” as selected by their employers. This would help ensure that employees are focused on obtaining skills that are most relevant to the needs of their employers, both in their current positions, and in more advanced roles. The Phoenix Partnership, through the RJRI grant, planned to pay for 50% of employee time at a rate of \$13/hour for eight hours for all Manufacturing Development Series modules, with the other 50% paid for by employers.

Additional Support

Trainees were offered transportation and childcare services to facilitate access to the training series. All of the modules were intentionally offered during working hours, and employees were compensated for their time by their employers (who could receive reimbursement through RJRI). To execute the training process, employees in need of childcare had the option of utilizing a site specific day care facility or receive reimbursement for child care services up to \$20/hour for the first child and \$10/hour for each additional child. While the majority of the employees were taking classes during their normal working hours and did not need childcare services, many of the manufacturing partners operate on multiple shifts, and the Phoenix Partnership was dedicated to ensuring that all employees had an equal opportunity to

benefit from the training modules. Reimbursement for transportation was offered based on miles traveled at a rate of \$.54 per mile and some employers organized ride-sharing options among participants or encouraged them to identify alternative forms of travel for which they would be reimbursed.

VI. Achievements

Partnerships

Effective Meeting Strategies

The Phoenix Partnership found that rotating the planning meetings to different companies was helpful so that every company had similar experiences and expectations for the amount of time partners were away from their sites.

Successful Training Curriculum

The Phoenix Partnership was particularly pleased with the presentation of the training curriculum by instructors at NEIT and Polaris MEP, so it planned to continue its partnership with these groups.

Employer Partner Buy-In

Overall, the Phoenix Partnership was proud of the employer partner involvement in the development and implementation of the training program. Leaders of the companies were involved with and committed to the training program, and this helped to ensure successful recruitment and that training content pertained to current employer needs. The use of “Employer Commitment Letters” helped to ensure ongoing commitment to the training program from the employer partners.

In addition, the Phoenix Partnership identified several new employer partners which expanded its partnership list. This increased its ability to move workers from training to employment. Expanding the sector partnership was key to creating an efficient training to employment pipeline.

Recruitment

Meeting Recruitment Goals

The Phoenix Partnership was able to recruit participants for its training series without problems. The employees were interested in taking the training, so the partnership did not experience difficulties in meeting its targeted enrollment goals.

Trainee Barriers

Most training participants did not encounter any consistent barriers that kept them from successful completion of the training series. The partnership noted that one training participant was unable to complete the training program due to family issues, but this was identified as an outlier.

Training

Successfully Meeting Training Outcomes

Overall, the Phoenix Partnership believed it met its intended goals and objectives. The curriculum was successful, and employees appreciated learning the content that was presented and how it connected directly to their work practices. The partnership was dedicated to changing the curriculum as needed to reflect employer demand. As part of their evaluation strategies, employers found that workforce productivity for employees who took part in the training improved. The partnership found that the RJRI training seemed to help newer employers most whereas the previously-funded Incumbent Training worked better for employees having been around for many years but needed specific skills or a competency to improve their productivity or move to a new position within the company.

Transition from Training to Employment

This grant was specifically designed for incumbent employees already employed at these companies. As a result, all participants were already employed.

Other

Hiring a Facilitator

Hiring a facilitator to help write the grant and help to facilitate meetings and decision-making was identified as a strength because the person hired was not an employee of the companies so was able to provide helpful, unbiased suggestions to the partnership. In addition, the partnerships brought in specialists to consult as needed.

The partnership came close to meeting its enrollment and completion goals. The table below details the number of participants who took part in the various trainings during 2016:

Table 3. Performance Metrics

IG-24 Phoenix Partnership (Hyman Brickle)	Start Date of First Cohort	Proposed End Date for All Cohorts	Target Enrollment	Enrolled	Target Completed	Completed
Recruitment, Training, and Employment						
Manufacturing Essentials - (2 cohorts) (Incumbents)	9/7/16	2/1/17	40	38	40	36
Other Objectives						
Total participants that received OSHA 10 card					40	33 (3 participants already had a card)
Total participants that earned academic credits					40	37
Total participants promoted due to training					40	Ongoing
Total participants that received increased wages due to training					40	14
Additional Partners added					TBD	5

VII. Challenges

Partnerships

Partner Coordination

The biggest challenge of the grant was related to the coordination of getting all five partner companies on board, ensuring each company had someone to attend regular meetings, and tailoring the training to meet the needs of companies (e.g., different competencies of Lean, different opinions). As such, scheduling and holding meetings with all the partners also proved to be difficult. For example, one of the smaller companies that was involved had to miss multiple meetings during the first year, so the partnership saw less participation from this company than others. While the coordination of companies was a challenge, the Phoenix Partnership also found this to be an incredible strength in that it was able to pull everyone together and design a training program that worked for employees at all five companies, and regularly adjusted the program based on employer and employee needs.

Convincing Industry Employers to Join the Partnership

Hyman Brickle & Son, Inc. also found it challenging to convince some of the interested partner companies of the benefits of the training using the Lean model. The companies who were already utilizing the model were easier to convince than the companies who had no immediate understanding of the process. However, once information was shared, the group seemed to converge quite easily on the need and importance of the training.

Recruitment

Broadening Language Requirements

The partnership mentioned that employees in the initial training series were required to speak English because the training was only provided in that language. Thus, a future idea determined by the partner members was to design materials in Spanish due to the influx/prominence of employees who are native Spanish speakers and who may benefit from learning the material in their native language to guarantee full acquisition.

Trainee Lack of Ability to Complete the Full Training Series

Another challenge of the grant was identifying employees who could take part in the full training series (four hours, once a week for 10 weeks). The training was held during work hours, thus it required employees to be away from their job for half a day each week during the training series. Convincing supervisors to allow their employees to take time off (essentially sacrificing short-term productivity) to attend the training proved to be difficult for recruitment efforts.

Trainee Barriers

Transportation

Some participants had difficulties with locating viable transportation options because the training was held in a different location from their employment. Though NEIT is quite centrally

located within the state, this still required participants to identify transportation to areas with which they were less familiar. However, the partnership was able to work with participants to identify viable options so that this would not impede successful program completion.

Training

Implementing Both Cohorts

The Phoenix Partnership had initially proposed to complete two cohorts during the first year of the grant (with the second cohort starting two weeks after the first), but the partnership was forced to delay starting the second cohort because it needed to make sure there were not too many employees away each week from the production line. Member companies were not able to sacrifice any more employee hours than could be required for one cohort of participants. Therefore, the partnership decided to only hold one cohort at a time, and wait to start the second cohort after the first cohort had graduated.

Navigating Training Logistics

One challenge dealt with employees navigating between time at the job and time at the training on the actual day of the training. For example, some employers required employees to come to work before going to the 8:00am training, whereas other employers did not have this expectation. Lunch expectations were also challenging because companies had to determine expectations regarding the amount the time employees were allotted for lunch, and as a result, the partnership experienced issues relating to the coordination of lunch policies between the various partner companies. Each company had to identify these logistical issues and come up with a plan that all employees understood.

Transition from Training to Employment

Navigating the Shift from Traditional to Lean Manufacturing

The reality of the Lean Manufacturing model is that it requires a cultural shift from the traditional model of manufacturing. This model requires employees to maintain a clean, organized work environment, while also requiring an in-depth use of metrics, analysis, and supervisor observation. Employees have stated that maintaining their position at their respective company is more difficult because the Lean model requires employees to think in new ways. Therefore, while this model may improve job retention, some employees consider it too demanding. Therefore, the partnership learned the importance of identifying employees that are the right fit for the jobs and providing career development options for them regardless of their career stage.

Other

Although the Phoenix Partnership set out to increase the wages of and career advancement of incumbent workers, initially there was no system available to track which

participants received wage increases or promotions in year one so tracking program effectiveness was difficult for this period. A tracking system was implemented in year 2.

VIII. Sustainability

The Phoenix Partnership's intent is to operate the MCE well beyond the granting period. To this end, the partners have agreed on a provisional structure for management and funding of the MCE in the absence of continued state funding. RIMA has been identified as a possible management partner for the MCE. The Phoenix Partnership has made it a priority to ensure ownership of the developed curriculum modules (after an initial one to two year period of exclusivity) in order to ensure the long-term financial sustainability of the training program. This ownership will keep the costs to employers down, when there is no longer funds for reimbursement of wage hours and employee training costs.

Furthermore, the partnership envisions a funding model in which multiple manufacturing industry employers pay a fee for membership to the MCE partnership, in order to benefit from the training services offered, and then continue to pay for employee training on a per employee basis, estimated at cost of \$112.50 per employee, per class, well below the average pricing for industry training classes. As the membership in the MCE increases, through promotional efforts of RIMA (with support from the metrics from the program evaluation), the cost of management of the MCE will continue to decrease per member. The Phoenix partners will also seek funds for the MCE from philanthropic and private institution interested in bolstering employment, manufacturing, and economic development in Rhode Island.

IX. Lessons Learned

The following lessons were learned by the Phoenix Partnership in executing this training program:

- Design training materials in Spanish to ensure Spanish-speaking employees can take part in the training series
- Send the newest employees to the Manufacturing Essential training series because they seemed to benefit more from the training content.

X. Best Practices

These best practices were utilized by the Phoenix Partnership:

- Have meetings at different sites to accommodate schedules and ensure all companies have similar obligations regarding travel time.
- Ensure commitment from the top leaders of the employer partners through meeting involvement, training content relevant to employer needs, and the use of commitment letters.
- Hire a facilitator to write the grant and facilitate meetings and decision-making processes.

- Provide funding through the grant to pay for employee time while at the training program to ensure employees receive full compensation and help employers recruit for the training.
- Conduct post-evaluations for participants with their supervisors to help see if the training actually had an impact on workforce productivity.
- Ensure direct connections between work environment/practices and the training content.

XI. Recommendations

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

- Provide resources to expand the RJRI training program to include new companies and individuals in the training series. This would help address workforce needs in the manufacturing sector and build upon the successes in this program.
- Encourage partnerships to utilize a facilitator when one employer partner is the lead agency. This was a positive strategy for this partnership when working with other employer partners, some that would be considered competitors. The facilitator allows for companies to be less concerned about employee “poaching”.
- Encourage employers to have a plan in place to avoid disruptions to the production line when employees are away at training, such as allowing another worker to pick up the hours.
- For incumbent trainings, ensure evaluations include a post-evaluation related to workplace productivity.
- Continue to provide resources for transportation, childcare, and tuition-related expenses to overcome any barriers to program completion for participants.
- Facilitate grantees to develop materials in the primary languages of the employees, such as Spanish, to ensure that participants who speak languages beyond English can participate in the trainings. This might include partnering with a Latino service agency who could also potentially bring new recruits to fill any pipeline issues.
- When partnerships want to develop centers, such as the Manufacturing Center of Excellence, ensure larger initiatives properly budget to ensure they have the support and resources needed to meet these larger goals.