Feasibility Study and Evaluation of Non-Traditional Occupation Demonstrations

Interim Report

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EXECUTIVE SUMMARY

In June 2013, the U.S. Department of Labor (DOL) contracted with IMPAQ International (IMPAQ) to implement the "Feasibility Study and Evaluation of Non-Traditional Occupation (NTO) Demonstrations." NTOs are occupations where specific populations and subpopulations are traditionally underrepresented. DOL defines underrepresented occupations as those in which individuals from one gender or minority group constitute less than 25% of the individuals employed in such occupations.[1]

The NTO demonstration and its evaluation are identifying, demonstrating, and evaluating a specific evidence-based strategy designed to increase short-term outcomes associated with women's NTO employment. The demonstration's multi-pronged outreach approach involves targeted recruitment content implemented in two demonstration sites to encourage participant enrollment in NTO-related training programs. These program sites, located in Washington and New Mexico, are funded through DOL's American Apprenticeship Initiative (AAI) grants. The targeted recruitment's behavioral approach is designed to encourage (or nudge) women to take steps towards applying to these programs. The evaluation is testing the effectiveness of this intervention on short-term outcomes using a randomized-controlled trial (RCT) to assign study sample members to a treatment or a control group.

To implement this study, IMPAQ partnered with the Institute for Women's Policy Research, the National Alliance for Partnerships in Equity, and the communication's firm Reingold, Inc., hereafter referred to as the evaluation team.

1. STUDY IMPORTANCE

Barriers that discourage or prevent women from entering NTOs limit their access to high-paying jobs. Employment in NTOs can lead to higher paying jobs for women without a four-year college degree.[2] These higher paying jobs, including those with opportunities to acquire skills and knowledge in occupations with sustainable and innovative career pathways, also have the potential to address the gender wage gap.[3] Further, the Workforce Innovation and Opportunities Act and the Carl D. Perkins Vocational and Technical Education Act require that training practitioners and programs ensure equal opportunity and participation for a list of underserved populations that includes women.[4]

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[1] United States Department of Labor's Women's Bureau: Traditional and nontraditional occupations. https://www.dol.gov/wb/stats/nontra_traditional_occupations.htm

[2] Mastracci, S. H. (2003). Employment and training alternatives for non-college women: Do redistributive policies really redistribute? *Policy Studies Journal*, *31*(4), 585-601.

[3] Blau, Francine D., and Lawrence M. Kahn. (2016). The gender wage gap: Extent, trends, and explanations. No. w21913. National Bureau of Economic Research.

[4] Examples:

- Accountability requirements of Carl D. Perkins Vocational and Technical Education Act (P.L. 109-270)
- WIOA Job Corps equal opportunity requirements (P.L. 113-128, 128 Stat. 1553, codified as amended at 29 USC § 3208(a))

Thus, evidence-based knowledge on strategies that help reduce barriers associated with NTO entry for women is critical. Many previous studies reported success with recruitment content that incorporates NTO themes designed to reduce these barriers for women.[5,6,7,8] However, no rigorous evaluation has validated or quantified the effectiveness of these claims. The current study provides the first rigorous evaluation of women-themed recruitment content directed at women and represents an easy-to-implement recruitment approach for NTO training programs in general. The results of this RCT study will advance DOL and training practitioner knowledge on the effectiveness of using a women-themed, multi-mode outreach approach to encourage women to enter traditionally male-dominated occupations.

2. PURPOSE OF THE REPORT

This Interim Report provides a detailed description of the steps taken by the evaluation team to identify, design, and implement: (1) a demonstration to encourage women to apply to an NTO training program, and (2) an associated evaluation to estimate the effectiveness of the recruitment content being tested. To date, the evaluation team completed the implementation and collection of outcomes data for the first of two demonstration cohorts (Cohort 1 was implemented in Fall 2017, Cohort 2 is being implemented in Spring 2018).

3. THE DEMONSTRATION

The evaluation team began the project by conducting a thorough literature review of barriers to NTO entry and strategies to address those barriers, with an initial focus on women. The purpose of the literature review was to help select a demonstration strategy designed to increase entry into NTOs. Rooted within this objective was to document the existing evidence base as it pertains to strategies/programs that have successfully addressed barriers to NTO entry.

Workplace/career-related barriers and strategies to address them were chosen as the focus of this study.[9] The spectrum of workforce/career-related barriers begins with those that cause misperceptions of NTOs and prevent general awareness of, and entry into, NTOs; further along the spectrum are barriers to NTO advancement and retention. Strategies such as the targeted recruitment materials and practices tested in the NTO demonstration address entry-level barriers

- WIOA YouthBuild equal opportunity requirements (P.L. 113-128, 128 Stat. 1580, codified as amended at 29 USC §3226(c)(3)(B)(viii))

[5] Glass, C., & Minnotte, K. L. (2010). Recruiting and hiring women in STEM fields. Journal of Diversity in Higher Education, Vol. 3, No. 4, pp. 218–229.

[6] Puerto, C., Guggemos, A, Shane, J., (2011). Exploration of strategies for attracting and retaining female construction management students. 47th ASC Annual International Conference Proceedings.

[7] Costello, C., 2012. Increasing opportunities for low-income women and student parents in science, technology, engineering, and math at community colleges. Washington, DC: Institute for Women's Policy Research.

[8] Milgram, D. (2009). The CalWomenTech Project: Increasing Recruitment and Retention of Female College Students in Technology Courses. In WEPAN 2009 Conference. Alameda, CA: Institute for Women in Trades, Technology and Science (IWITTS), pp. 1–5.

[9] Although women also face educational barriers and strategies that relate to issues women face in the K-12 and postsecondary education programs that are the basis for entry into NTOs—particularly in the STEM fields (science, technology, engineering, and mathematics)—the strategies most relevant to DOL's objectives are primarily from the literature on workplace/career-related strategies.

to NTOs; strategies such as professional mentoring programs address barriers further along the spectrum that stand in the way of NTO retention or advancement of women in the workplace.

3.1 The Target Population

Selecting women as the target population for the demonstration was based on two factors: (1) women face overwhelming barriers to entry into and retention in NTOs and (2) the literature on strategies for increasing NTO participation pertains primarily to women. More specifically, the intervention targets low-to-medium skilled women.

3.2 The Intervention

Informed by the literature and in consultation with subject matter experts, the technical working group and DOL representatives, the evaluation team assessed the feasibility of conducting a demonstration and evaluation of 11 potential workplace/career-related strategies. The feasibility of each strategy was examined along three dimensions: *implementation*, *evaluability*, and *DOL interest*.

Constraints related to developing and implementing the NTO outreach demonstration were primarily due to the evaluation's need to track individual outcomes and isolate the recruitment intervention (treatment) to determine its effectiveness. This requirement created challenges that the evaluation team overcame through the demonstration design as implemented.

A strategy involving a ***multipronged recruitment approach*** was identified as the intervention for the demonstration. The strategy's objective is to ***create more awareness about the benefits of NTOs, reduce the misperceptions of NTOs*** among women, and ***nudge them to take short-term steps towards applying for an NTO training program***. The demonstration was designed to provide recruitment information using three different outreach modes: 1) multiple emails, 2) websites, and 3) a follow-up postcard. The evaluation team selected these three modes for delivering recruitment content based on two requirements:

- **Ability to track outcomes at an individual level.** Evaluating the demonstration requires tracking outcomes of individual sample members. This data requirement made certain modes (such as social media and brochures or flyers) unusable, because individual-level exposure to these modes cannot be identified nor can their response to exposure be tracked.
- **Suitability for practitioners.** To maximize the usefulness of the study's findings, the evaluation team selected modes that workforce system practitioners either already use or could easily adopt at little cost.

3.3 Recruitment Content

Partnering with a communications firm, the evaluation team developed both women-themed treatment and generic control group recruitment content for the emails, postcards, and websites. Exhibit A provides an example of how the two types of content differ.

Exhibit A: Example of Women-Themed Treatment and Generic Control Content

Women-Themed Content: *Central New Mexico*

Generic Content: *Central New Mexico*

Women-Themed Content: *South Seattle*

Generic Content: *South Seattle*

Content for the treatment group used themes that address the awareness and misconception of barriers to NTOs by highlighting the benefits of and correcting misperceptions about NTOs, specifically for women. Such themes include: (1) higher wages in NTOs, (2) taking pride in the work product, (3) women in NTOs as role models, (4) work-life balance, and 5) countering common NTO misperceptions among women. Messages that aligned with each theme were developed, customized for each demonstration site, and adapted for the three different outreach modes (recruitment email, website, and postcards). In addition, in the treatment (but not the generic control) versions, the vast majority of photos were of women, and the testimonials highlighted NTO themes to appeal particularly to women.

Recruitment content for the generic control group was designed to be as similar as possible to the NTO-treatment group content, without explicitly targeting women, and without the specific recruitment themes chosen for the treatment content.

In addition, the evaluation team incorporated a set of behavioral techniques (nudges) in both the treatment and generic control group content to encourage completion of short-term outcomes, such as implementation prompts, deadlines, personalization, highlighting benefits, urgency, and loss aversion (US-DHHS 2015; US-DHHS 2016; DARLING ET AL; CHOJNACKI ET AL).

3.4 Geographic Setting

The setting is the organizational and geographic backdrop in which a demonstration is implemented. The evaluation team, in coordination with DOL, identified seven key criteria for evaluating the suitability of potential settings: target industry, timeline for training programs, presence of target population, training provider capacity, data availability, adequate data collection systems, and organizational buy-in. The general setting that emerged as most suitable for the NTO demonstration and evaluation consisted of grantees implementing DOL's American Apprenticeship Initiative (AAI). Two of these AAI grantees were selected as the demonstration sites, both of which met all seven implementation criteria.

South Seattle Community College. South Seattle Community College (South Seattle) is working with three training partners to implement the Partnership for Advanced Technology Apprenticeships in Manufacturing and Marine Engineering ($PATAM^2$) program. The program aims to create three new apprenticeship programs and expand 12 existing programs in advanced manufacturing, construction, and marine engineering—which together plan to serve at least 1,000 apprentices. The main goal is to scale and sustain apprenticeships by focusing on both ends of the apprenticeship pipeline. To reach this two-pronged goal, $PATAM^2$ will work to: (1) improve pathways *into* apprenticeship, and (2) expand and improve its employer base to supply jobs as trainees *exit* apprenticeship.

South Seattle's three training partners working with the evaluation team to implement the demonstration and evaluation are: Apprenticeship & Nontraditional Employment for Women (ANEW), Aerospace Joint Apprenticeship Committee (AJAC), and Clover Park Technical College (CPTC). The evaluation team is also working with the Washington Department of Economic Security (DES) to receive workforce participant data.

Central New Mexico Community College. Central New Mexico Community College (Central New Mexico) is implementing the New Mexico Information Technology Apprenticeship Program (NMITAP), which offers On the Job Learning (OJL) and Job Related Technical Instruction (JRTI) that align with five Information technology (IT) career paths: (1) IT Developer, (2) IT Security, (3) IT Systems, (4) IT User Support, and (5) Health IT. A major goal of this program is to help employers in the Albuquerque metropolitan area meet their growing need for workers in IT.

The evaluation team are working directly with Central New Mexico and the State Workforce Agency (SWA), New Mexico Department of Workforce Solutions (DWS), in New Mexico to implement the demonstration and evaluation in that site. Central New Mexico was involved in developing the demonstration outreach content and is currently working to collect data on

specific evaluation outcomes. However, the SWA in New Mexico chose not to share jobseekers' contact information with the evaluation team, and thus the SWA is conducting the demonstration outreach and collecting data on certain evaluation outcomes.

3.5 Demonstration Implementation

During the first demonstration phase for each cohort, the initial recruitment email, reminder emails, and a follow-up postcard is sent to each jobseeker in the demonstration, differentiating by treatment/generic control status as described above.[10] The initial email provides information on NTO industries and their benefits, as well as the specific grant training programs available in the respective demonstration site. The same email also encourages recipients to visit the website in the respective site for additional, more detailed information by clicking on the provided link. Four follow-up/reminder emails are sent to recipients who did not open the initial email or click on the link to the website. The postcard reminder includes information similar to the email content and provides a URL for the appropriate demonstration website.

During the second phase, the jobseeker visits the respective website and completes the interest form; treatment group members are linked to the targeted, women-friendly website in their emails, while control group members are linked to the generic, market-standard website . The website information includes more information on NTO industries; the types of jobs available; the benefits of those jobs including pay; and added details about the available training programs, including start dates and services offered. In addition to directing visitors to complete the interest form, the South Seattle websites ask them to select the programs they would like to learn more about.[11] New Mexico has only one training program as part of their AAI grant, and so this step is not applicable at that site.

During the third phase, the evaluation team sends post–interest form reminder emails to individuals who completed the interest form; training providers conduct follow-up with individuals who completed the interest form; and jobseekers attend information sessions.

In addition, as part of the third phase, training providers are notified when a website visitor (both treatment and control individuals) completes an interest form, indicating interest in their program. Using the interest form data, training providers follow up with each individual interested in their program(s), provide them with more in-depth information on the programs, and outline the steps required to apply to the programs. The training providers also furnish information on when and where information sessions on the training programs are to be held. Final email reminders are also sent prior to the enrollment deadline, encouraging recipients to complete an interest form, if not done already, and/or attend an information session, if the interest form was received.

[10] For the South Seattle Community College demonstration, the evaluation team sends these materials directly, using contact information received from the Washington DES. Because the New Mexico DWS declined to provide contact information of female workforce participants, staff at DWS sends the materials for the Central New Mexico Community College demonstration.

[11] Since only one training program is in operation in the Central New Mexico site, individuals completing the interest form on the treatment and control websites do not have to select the training program(s) they are interested in.

During the fourth and final demonstration phase, jobseekers complete the program application. After completing an application, they may enroll in the program(s) chosen or be referred to a non–grant related training program more appropriate to their skills or interests.

As described above, each demonstration phase aims to encourage individuals to take specific actions leading to completing a training program application. These actions correspond to the outcomes associated with each demonstration phase, as discussed in the next section.

To monitor the demonstration, the evaluation team engaged with demonstration partners to ensure that: (1) all required components were implemented and functioning properly, and (2) evaluation data were tracked appropriately. We also developed "Demonstration Production Reports" as early outcomes data became available to detect problems associated with demonstration implementation early enough for adjustments to be made.

4. EVALUATION

The purpose of the NTO study is not only to implement a strategy to encourage more women to consider training programs in NTOs but also to evaluate the strategy's effectiveness. To do so, the evaluation will address two research questions:

- Is women-themed recruitment content more effective in nudging women to take short-term steps toward applying to an NTO training program compared to generic recruitment content?
- Do differences in the responses to these messages vary across subgroups of women (by age, race, ethnicity, level of education, etc.)?

4.1 Random Assignment

The first step in the evaluation is to randomize female jobseekers registered with the state workforce system (the study sample)[12] into either the women-themed treatment group or the generic control group. Randomization ensures that any differences in observed outcomes can be attributed solely to the treatment with a known degree of statistical confidence. Over the course of the demonstration period (June 2017 to March 2018), the evaluation team will randomly assign approximately 20,000 female jobseekers 18 years old or older from Central New Mexico and 15,000 female jobseekers (also 18 years old or older) from South Seattle. As described above, female jobseekers randomized to the women-themed treatment group receive recruitment messages specifically tailored to overcome awareness and misperception barriers by emphasizing the benefits of the advanced manufacturing/construction and IT industries for women. The control group members receive generic recruitment message that do not address such barriers.

[12] As described in more detail below, IMPAQ received public workforce participant data from the Department of Employment Security in Washington and the Department of Workforce Solutions in New Mexico.

4.2 Outcomes of Interest

The evaluation is designed to measure the differences between the women-themed treatment group and the generic control group on three short-term behavioral outcomes:

- **Open an email** (*in response to receiving an initial email or four follow-up emails).*
- **Click on a link or enter a URL** to go to a program recruitment web page (*in response to opening an email or entering the web page URL from information provided in the postcard).*
- **Complete an interest form** (*in response to information learned from the email and website)*.

These outcomes are confirmatory, defined as measurable with a known degree of statistical confidence. The evaluation will also compare treatment/control differences on two longer term outcomes:

- **Seek more information** *(e.g., calling a program office, attending an information session)*
- **Apply to a program**

These outcomes are exploratory, defined as those for which we do not expect to be able to estimate the specific impact of the intervention, due to a limited sample size as well as the challenge of connecting those outcomes to the intervention itself, rather than to intervening outside influences that are not part of the intervention.

4.3 Data Sources

The study calls for three main types of data.

Workforce Participant Data. The demonstration and evaluation rely on jobseeker contact and demographic information on women in the demonstration areas for three purposes: (1) to select a study sample of participants for the demonstration (to be randomly assigned to a treatment or generic control group status); (2) to extract baseline data for the study sample; and (3) to compile contact information, such as emails and home addresses, for distributing the recruitment content to the study sample. We worked with the SWAs in South Seattle and Central New Mexico to access the requisite jobseeker contact information for all female jobseekers who received workforce system services within the local area.[13]

As mentioned above, a crucial difference between the South Seattle and Central New Mexico sites is that the SWA in Washington was willing to share all state workforce participant data required for the demonstration, enabling us to directly conduct the demonstration outreach. The SWA in Central New Mexico chose not to share the state workforce participant contact information, having instead conducted outreach themselves, with our guidance and support.

[13] Albuquerque for Central New Mexico and Seattle and surrounding areas for South Seattle.

Confirmatory Outcomes: Open an Email (1), Click on a Website Link (2), Complete an Interest Form (3). For both demonstration sites, the three confirmatory outcomes are tracked using analytics available from email distribution software and built-in website analytic tools, which track whether each email is opened. In addition, each email has a unique link to the treatment or generic control website, as appropriate, which allows the website's analytic tools to track who visited the website.

Given the two different data sharing agreements noted above, data on Open an Email (1) and Click on a Website Link (2) are collected by different organizations—the project team collects the data for South Seattle, and the New Mexico SWA collects the for Central New Mexico. For outcome 3 (complete an interest form), however, the evaluation team tracks the relevant data for both sites without site involvement.

Exploratory Outcomes: Gather More Information (4) and Apply to a Program (5). Since interested jobseekers reach out directly to the training providers, both sites collect these data as part of implementing the demonstration component of their program, and then transfer the data to the evaluation team on an agreed-upon schedule. We manage the links for attendance and application/enrollment records to the original sample using identifiers such as name, contact information, and Social Security Number (SSN).[14] After a match is made, the evaluation team record any applicable outcomes achieved for individuals in our original sample.

[14] For South New Mexico, IMPAQ shares attendance and application/enrollment records with NMDWS, which matches the data back to the study sample.

CHAPTER 1. INTRODUCTION

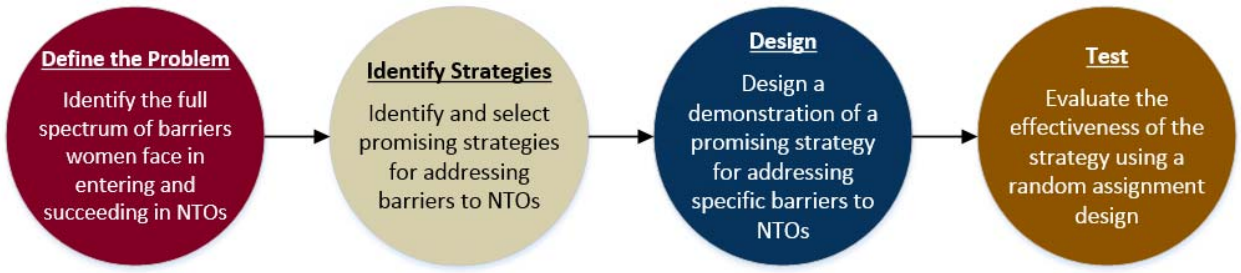
In June 2013, the U.S. Department of Labor (DOL) contracted with IMPAQ International (IMPAQ) to implement the "Feasibility Study and Evaluation of Non-Traditional Occupation (NTO) Demonstration." NTOs are occupations where specific populations and subpopulations are traditionally underrepresented. DOL defines underrepresented occupations as those in which individuals from one gender or minority group constitute less than 25% of the individuals employed in such occupations.[15] The study's purpose is to identify, demonstrate, and evaluate evidence-based strategies that increase opportunities for employment in NTOs.

To implement this study, IMPAQ partnered with the Institute for Women's Policy Research, the National Alliance for Partnerships in Equity, and the communication's firm Reingold, Inc., hereafter referred to as the evaluation team.

1.1 THE NON-TRADITIONAL OCCUPATION (NTO) STUDY IN BRIEF

Exhibit 1.1 presents the overarching process used to implement this study. This study began with an extensive literature review of barriers to entering NTOs, and promising strategies for addressing those barriers. The findings from the literature review, combined with recommendations from DOL and the project's subject matter experts, led to the decision to conduct a demonstration to test the effectiveness of a recruitment strategy that incorporates themes designed to reduce barriers to NTOs (women-themed). The specific goal of the project as implemented is to address awareness among women of NTOs and perceived barriers to entering such occupations, and to encourage more women to consider careers in NTOs where women are traditionally underrepresented. The recruitment content developed as part of the demonstration uses behavioral techniques designed to encourage women to take steps towards entering an NTO training program.

Exhibit 1.1: Study Implementation Process



As part of the feasibility study, we engaged two American Apprenticeship Initiative (AAI) grantees—Seattle, Washington (South Seattle Community College), and Albuquerque, New Mexico (Central New Mexico Community College)—to implement the demonstration. Both grantees provide entry-level training in industries that are NTOs for women. The South Seattle

[15] See https://www.dol.gov/wb/stats/nontra_traditional_occupations.htm. Retrieved on 12/29/2016.

grant provides training in advanced manufacturing and construction; the Central New Mexico grantee provides training in information technology.

To evaluate the demonstration, we initiated a randomized-control trial (RCT), in which the treatment group receives women-themed recruitment content and the generic control group receives non-themed, generic recruitment content. Content is delivered to individuals assigned to each group through multiple emails and a postcard, all of which direct the female jobseeker to a website that contains additional recruitment content. We were careful to select communication modes that were easily accessible to workforce system practitioners. Each communication mode used as part of this demonstration encourages the female jobseeker to take specific steps towards enrolling in an NTO training program. An example of this messaging in Exhibit 1.2 presents the versions of the postcard distributed to the women-themed treatment and generic control groups, respectively, in the Central New Mexico demonstration site. See Appendix A for women-themed and generic materials for both sites.

The evaluation will measure and compare the effectiveness of the two sets of recruitment content in encouraging women to take specific actions towards applying to an NTO training program. The actions or behaviors the multi-mode content is nudging female jobseekers to take include: (1) opening the email, (2) clicking on a link to be directed to a recruitment website, (3) completing an interest form, (4) gathering more information on the training program, and (5) applying for the training program.

The following research questions will be answered by the study:

- Is customized/women-themed recruitment content more effective in encouraging women to take short-term steps toward applying to an NTO training program compared to non-customized/non-themed, generic recruitment content?
- Do the differences in responses to these messages vary across different subgroups of women (age, race, ethnicity, education, etc.)?

Exhibit 1.2: Postcards Used in Central New Mexico Demonstration

Treatment Postcard: Women-themed

Generic Control Postcard: Non-themed

Addressing women's barriers to NTO entry is important for two reasons. First, studies have shown that employment in NTOs can lead to higher paying jobs for women without a four-year college degree (MASTRACCI 2003). These higher paying jobs, including those with opportunities to acquire skills and knowledge in occupations with sustainable and innovative career pathways, also have the potential to address the gender wage gap (BLAU, FRANCINE, AND LAWRENCE 2016). Thus, barriers that discourage or prevent women from entering NTOs limit their access to

these high-paying jobs. Exhibit 1.3 shows the top 10 fastest growing, high-paying occupations. All these occupations offer wages far above the 2016 U.S. median annual wage of $37,040, promising high levels of financial security for entrants. In 2016, women represented less than 15% of workers among six of those 10 NTOs.

Exhibit 1.3: Top 10 Fast-Growing, Highest-Paying NTOs, 2016–2026

Occupation Title	Percent of Workers in Occupation Who Are Female	2016 Employment (in thousands of jobs)	Percent of Predicted Growth in Jobs 2016-2026	2016 Median Annual Wage (in Dollars)
All occupations[#]	46.8	151,436	7.4	$37,040
Architectural and engineering managers	5.3	136	5.5	$134,730
Computer hardware engineers	24.7	69	5.5	$115,080
Aerospace engineers	7.8	130	6.1	$109,650
Computer network architects	9.7	115	6.4	$101,210
Chemical engineers	20.1	79	7.6	$98,340
Engineers, all other	12.2	539	6.2	$97,300
Electrical and electronics engineers	10.8	293	6.5	$96,270
Information security analysts	21.8	89	28.4	$92,600
Construction managers	7.4	812	11.4	$89,300
Transportation, storage, and distribution managers	17.1	299	6.7	$89,190

Source: Bureau of Labor Statistics. Employment Projections.
[#] Includes both NTOs and non-NTOs.

The second reason for concentrating on barriers to NTO entry is that the Workforce Innovation and Opportunities Act (WIOA) and the Carl D. Perkins Vocational and Technical Education Act (Public Laws 109-270 and 113-128) require that training practitioners and programs ensure equal opportunity and participation for underserved populations, including racial minorities, ethnic minorities, and women. But while many studies reported success of such women-themed recruitment content, no rigorous evaluation has validated or quantified the effectiveness of these claims (GLASS AND MINNOTTE 2010; PUERTO AND SHANE 2011; COSTELLO 2012; MILGRAM 2009). This study provides the first rigorous evaluation of women-themed recruitment content and represents an easy-to-implement recruitment approach for NTO training programs. The results will advance DOL and training practitioner knowledge of the effectiveness of using a women-themed, multi-mode outreach approach to encourage women to enter traditionally male occupations.

1.2 PURPOSE AND STRUCTURE OF REPORT

This report describes the steps taken by the evaluation team to design and implement the demonstration in two sites and evaluate the effectiveness of the women-themed recruitment content in encouraging women to take steps towards applying to an NTO training program. Unlike other demonstration projects, with a pre-identified treatment model, the intervention implemented as part of this demonstration is based on the findings from an extensive literature review and a rigorous feasibility study.[16] By outlining the steps taken to design and implement this study, this report (i) explains demonstration- and evaluation-related design and implementation-related decisions made during the feasibility phase, (ii) underscores the rigor of the study design, and (iii) provides important implementation details for future implementation of similar demonstrations and evaluations.

Chapter 2 describes the processes for selecting, developing and refining this intervention to meet the study objectives. Chapter 3 describes the demonstration and evaluation design—including the research questions, data sources, and methodology. Chapter 4 presents a detailed description of the steps taken to implement the demonstration and evaluation, as well as the challenges and lessons learned throughout the process. Chapter 5 outlines the study next steps.

[16] The Feasibility Study included an extensive review of the literature and consultations with subject matter experts, a Technical Working Group and DOL.

CHAPTER 2. INTERVENTION SELECTION AND DEVELOPMENT

This chapter presents an overview of the process followed to select and develop a behavioral intervention for the demonstration. This decision-making process provides important context for understanding the demonstration and evaluation design.

We begin by reviewing the barriers to NTO entry and strategies that seek to address these barriers. Identifying such barriers and strategies to address them informed our intervention selection process, by allowing us to organize them into two categories (workplace/career-related and education), thus narrowing demonstration options based on what was most relevant to DOL, as well as appropriateness given our study constraints.

We also elaborate on our methodology for selecting the appropriate target population, outcomes, delivery modes, and geographical setting for the demonstration. Lastly, we describe the process for developing outreach content for the demonstration.

2.1 BARRIERS TO NON-TRADITIONAL OCCUPATION ENTRY AND RELATED STRATEGIES

As part of the first phase of the study, the evaluation team conducted a thorough literature review of barriers to NTO entry for women and minorities and strategies to address those barriers. The purpose of the literature review was to help select an intervention for the demonstration aimed at increasing entry into NTOs. Rooted within this objective was to document the existing evidence base as it pertains to strategies/programs that have successfully addressed barriers to NTO entry.

Barriers to NTO Entry. The literature review identified a spectrum of barriers that prevent women from pursuing careers in and entering NTOs, as well as from remaining in such occupations. These barriers, as noted, fall into two main categories: (1) workplace/career-related barriers, and (2) education barriers. Workplace/career-related barriers refer to the characteristics and perceptions of certain occupations that make women less inclined to enter and remain in them. Education barriers relate to the issues women face in the K-12 and postsecondary education programs that are the basis for entry into NTOs—particularly in science, technology, engineering, and mathematics (STEM) fields. The types of barriers that fall into these two categories, along with examples of studies for each one, are presented in Appendix B.

Strategies. The promising strategies the literature review identified for addressing barriers to NTO entry and retention fall into the same two general categories, as described below.

Workplace/career-related strategies are typically implemented by career guidance professionals, training providers, and employers. Outcomes typically include increased NTO employment among women and minorities, and increased access to, and retention and advancement in NTOs. These strategies generally address barriers associated with: (1) bias in career materials, mechanisms, and policy; (2) individual perceptions and responses to the characteristics of NTOs; and (3) lack of support services.

Exhibit 2.1 presents the full spectrum of workplace/career-related barriers to entry into NTOs, together with the strategies aimed at addressing each barrier. The spectrum of such barriers begins with those that cause misperceptions of NTOs and prevent general awareness of and entry into NTOs. Further along the spectrum are barriers to NTO advancement and retention. Workplace/career-related strategies such as targeted recruitment materials and practices address entry-level barriers to NTOs; strategies such as professional mentoring programs address barriers further along the spectrum that stand in the way of NTO retention.

Exhibit 2.1: Workplace/Career-Related Barriers and Strategies

		Barriers to NTO Entry				
		Lack of Awareness & Inaccurate Perceptions of NTOs	Biased Career Recruitment Materials & Practices	Lack of Occupational Training/ Inadequate Skillset	Negative Training/ Occupational Characte-ristics	Biased Career Mechanisms & Practices in the Workplace
Workplace Strategies	Targeted Recruitment Materials & Practices	✔	✔			
	Professional Development for Career Counselors	✔	✔			
	Pre-Apprentice-ship & Apprentice-ship Programs		✔	✔	✔	
	Institutional Changes in NTOs			✔	✔	✔
	Family-Friendly Policies & Supportive Practices				✔	✔
	Professional Mentoring Programs				✔	✔

Education strategies, in contrast, are typically implemented by education professionals. While highly correlated with addressing barriers associated with NTO entry, outcomes for these strategies typically include increased enrollment, retention, and graduation rates in STEM fields, rather than employment-related outcomes. Typical strategies address barriers related to the delivery of academic material, as well as interventions related to student proficiency, academic interest, and self-efficacy to pursue STEM-related academic programs.

Exhibit 2.2 presents the education strategies and the primary barriers they aim to address. Like the workplace/career-related barriers, the spectrum of education-related barriers to NTOs begins with those that prevent access to education in NTO subjects/fields, specifically STEM subjects. Further along the spectrum are barriers that prevent success and retention in NTO subjects/fields. The educational strategies identified via the literature review are aimed at addressing specific barriers along this spectrum.

Exhibit 2.2: Education Barriers and Strategies

		Barriers to NTO Entry			
		Access to and Participation in STEM Education	Biased Curriculum Structure & Instructional Attitudes	Stereotype Threat	Self-Efficacy
Education Strategies	Supplemental Education Programs	✔	✔		
	Curriculum Development	✔	✔		
	Student Mentoring Programs		✔	✔	✔
	Professional Development for Educators		✔	✔	✔
	Self-Affirmation Techniques			✔	✔

While both workplace/career-related and education strategies are critical to success in NTO entry and retention, the strategies most relevant to DOL's objectives are primarily from the literature on workplace/career-related strategies. Given the relevance of strategies to DOL's objectives, the NTO demonstration and its evaluation focus on the workplace/career-related approach.

Existing Evidence Base. The literature review analyses found considerable thought and effort given into investigating barriers to NTO entry and retention for women, as well as strategies that aim to address these barriers. However, most of the evaluations examined were qualitative in nature, relying on case-studies, semi-structured interviews, and focus groups. Of the few rigorous quantitative evaluations on the effectiveness of these strategies, most evaluate the effectiveness of education-related strategies, rather than workplace/career-related strategies. Thus, the NTO demonstration and associated evaluation will add to the existing evidence base pertaining to the effectiveness of strategies for addressing barriers to NTO entry and retention through workplace/career-related approaches.

2.2 INTERVENTION SELECTION AND DEVELOPMENT PROCESS

As intended, the findings from the literature review informed the intervention selection and development process. The evaluation team developed an actual intervention to implement as part of the demonstration and rigorously evaluated, which was based on a series of significant decisions. These decisions included selecting an intervention, its target population, outcomes for measuring its effectiveness, its delivery modes, and its geographical setting. The decisions illustrated in Exhibit 2.3 and described below informed the demonstration.

2.2.1 Selecting the Intervention—Multipronged Outreach

In consultation with our subject matter experts and DOL, the evaluation team assessed the feasibility of conducting a demonstration and evaluation of 11 potential workplace/career-related strategies. The feasibility of each strategy was defined along three dimensions: *implementation*, *evaluability*, and *DOL interest*. The evaluation team convened a technical working group (TWG)[17] meeting and held several discussions with key DOL stakeholders to discuss each strategy.

In all these interactions, the evaluation team sought feedback on which strategies were feasible, which would be most effective, and which were of greatest interest to DOL. Three plausible strategies emerged:

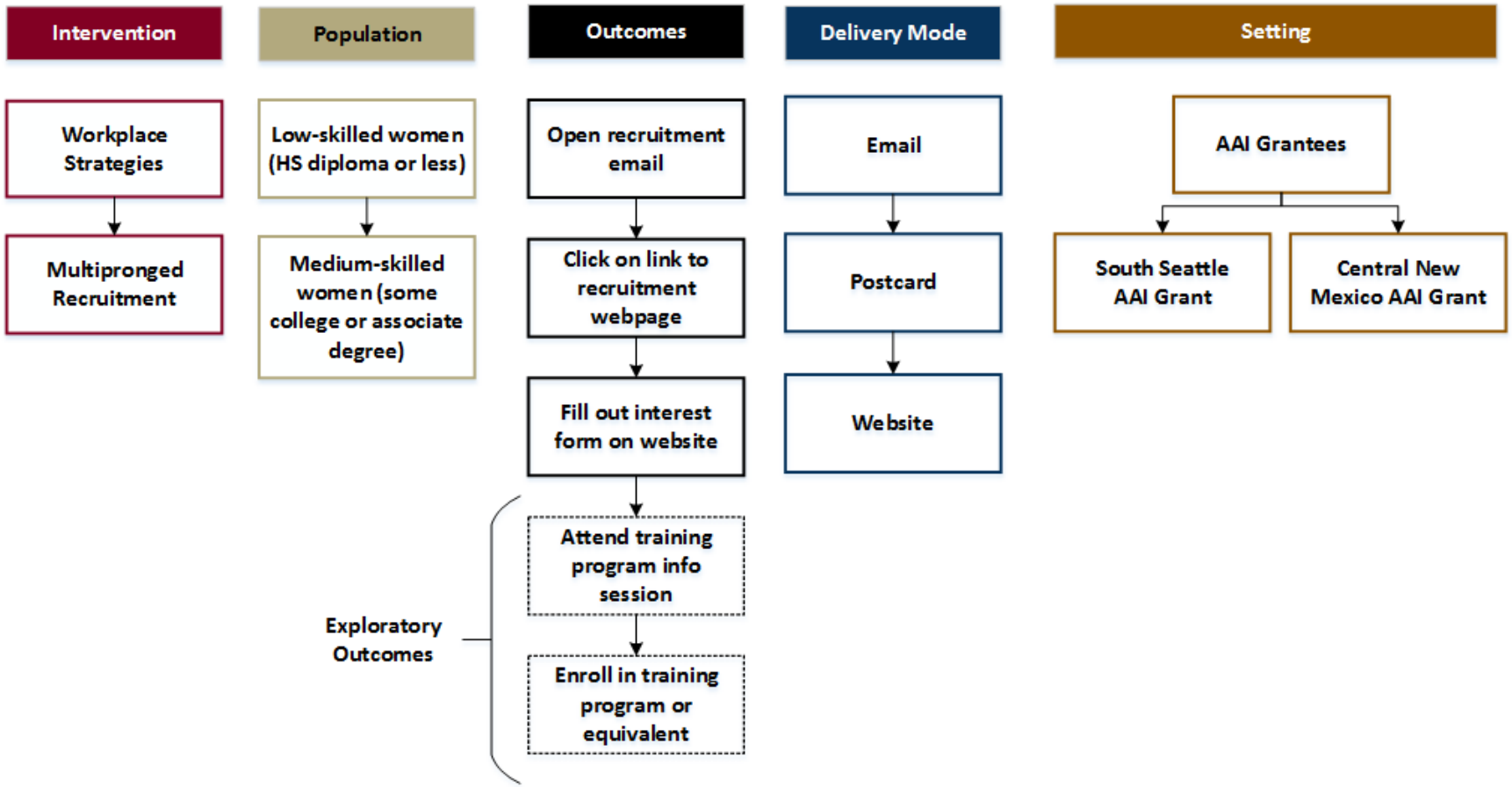
- Multipronged outreach approach to create more awareness and reduce misperceptions of NTOs.
- Professional development for career counselors.
- Components of/tweaks to the Women in Apprenticeship and Nontraditional Occupations (WANTO) grant programs.

In further consultation with DOL, a multipronged outreach strategy was selected for four primary reasons:

- Based in part on the literature review findings, the TWG and the evaluation team's partners concluded that a multipronged outreach strategy best addresses the "awareness" and "perception" barriers women face in considering entry into NTOs. Addressing these entry-level barriers was a good starting point for adding to the evidence base in this area.
- This strategy allowed the evaluation team to build specific behavioral components into the intervention that are: (1) of interest to DOL, and (2) have potentially broader applications to other DOL outreach/recruitment initiatives.
- The outcomes of interest associated with this strategy can be measured reliably in the short term.
- The timeframe and cost required to develop and implement this strategy was within the project's budget and timeline.

[17] The TWG comprised experts in issues concerning non-traditional occupations, bringing a balanced perspective and providing subject matter expertise and technical guidance. The role of the TWG has been advisory in nature, providing feedback and recommendations at key stages of the project. TWG members were identified through: (1) referrals from DOL staff and IMPAQ's project subcontractors/consultants, and (2) IMPAQ's scan of the relevant literature and other internet searches.

Exhibit 2.3: Multi-Pronged Outreach Intervention Selection Flowchart



2.2.2 Selecting the Target Population—Low-to-Medium Skilled Women

The literature review discussed barriers to NTO entry and strategies to encourage a wide variety of populations to enter NTOs—including women, men, African Americans, Hispanics, individuals with disabilities, veterans, and LGBT individuals. Selecting women as the target population for the demonstration was based on four major factors.

- The literature review showed that women faced overwhelming barriers to entry into and retention in NTOs.
- Most articles on NTOs that were reviewed pertained to women, providing the most evidence in support of strategies for increasing NTO participation among women.
- Increasing participation in NTOs among women is of great interest to DOL, because these occupations often pay higher wages and offer more benefits than do more traditional occupations for women.
- Increasing the representation of women in occupations within high-demand, high-growth industries can further help bridge the gender pay gap.

In collaboration with DOL, the evaluation team determined that a multipronged *outreach* intervention should target low-to-medium skilled women, because awareness, as well as perceptions, of barriers are the *initial* barriers inhibiting entry in NTO entry for this population.

2.2.3 Selecting Outcomes—Steps Toward Enrolling in NTO Training Programs

Determining the desired outcomes is an important early step in developing an intervention. The evaluation team decided to measure the effectiveness of the intervention based on the degree to which it achieves specific outcomes, which we categorize below as either confirmatory or exploratory. Confirmatory outcomes are those for which we expect to be able to estimate the causal impact of the intervention. Exploratory outcomes are those we are less likely to be able to tie back specifically to the intervention itself: the fact that they are further removed from the intervention makes it harder in principle to separate their impact from the impact of non-intervention factors, a constraint that is exacerbated by the limited sample size of the evaluation.

- Confirmatory Outcomes:
  - Open a recruitment email.
  - Click on a link within the recruitment email to an informational web page.
  - Complete an interest form on the informational web page.
- Exploratory Outcomes:
  - Take further steps to enroll in the program (such as attending an information session or calling to seek more information).
  - Apply to the training program or equivalent service.

The demonstration's intervention will be tested using several quick, short-term outcomes that allow us to test the effectiveness of the behavioral nudges in the women-themed content.

2.2.4 Selecting Demonstration Outreach Modes—Email, Postcard, Website

The three different content delivery modes selected for this intervention include: (1) multiple emails and (2) a postcard,[18] all of which direct the female jobseeker to (3) a website that contains additional recruitment content. Two factors drove the selection of these communication mode choices:

- **Ability to track outcomes at an individual level.** The impact evaluation requires tracking outcomes at an individual level. Tracking outcomes made certain communication modes, such as social media and brochures or flyers unusable, since we are not able to determine if individual sample members used these types of modes.
- **Suitability for practitioners.** To maximize the usefulness of the study's findings, the evaluation team selected communication modes that workforce system practitioners either already use or could easily adopt at little cost.

2.2.5 Selecting Sites—American Apprenticeship Initiative (AAI) Grantees

The site setting is the organizational and geographic backdrop that supports where the demonstration is implemented. We developed seven key criteria for evaluating the suitability of potential site settings:

- **Target Industry.** Involvement of potential implementing partner organizations in training programs that lead to NTO employment for women.
- **Timeline.** Overlap between the timelines for the training programs and the study period.
- **Target Population.** Implementing partner organization interest in and plans to target low-to-medium skilled women for their training programs.
- **Training Provider Capacity.** The capacity of implementing partner organizations' training programs to receive new enrollees.
- **Data Availability.** Ability of partners to share jobseeker contact and demographic data, as well as information at the individual level on study outcomes.
- **Data Systems**. Existence of adequate data collection systems to collect the necessary data for the evaluation.
- **Buy-in.** Implementing partner organizational buy-in and willingness to participate in the study.

The setting that emerged as most suitable for the demonstration and evaluation was the AAI grantee setting. See box below for how this setting scored on the above criteria.

[18] The postcard mode selected serves as an alternate method for directing individuals who do not regularly check their email to the website. IMPAQ is not able to track individual responses to the postcard but we are able to track any outcomes completed once an individual visits the website (including completing the interest form, attending an information session, and applying to a training program).

- Almost all AAI grantees include training programs that lead women into NTOs.
- AAI grantees are required to serve 300 to 1,000 apprentices over their five-year grants. To meet these goals, many AAI grantees will need to expand their program's capacity to serve additional apprentices, irrespective of demonstration and evaluation needs—giving them adequate capacity to accommodate any additional enrollment from the demonstration's recruitment efforts.
- Several AAI grantees have minority recruitment goals that include recruiting women into their training programs.
- The AAI grantees' recruitment timeline coincides with the timeframe of the study intervention.
- The AAI grant performance reporting requirements already require grantees to develop the types of data collection systems this evaluation requires.

Working with key DOL stakeholders, we identified five AAI sites as the most suitable candidates. Following the detailed interviews that the evaluation team held with grant leaders, training partners, and state and local workforce development staff, three sites were eliminated for one or more of the following reasons:

- Limited plans to conduct targeted recruitment of women.
- Insufficient interest in participating in the study.
- Limited options for entry-level training programs appropriate for low-to-medium skilled women, such as pre-apprenticeships/boot camps.
- Prohibitive cost estimates for demonstration implementation.
- Inability to share/provide access to female jobseeker contact information.
- Likelihood of insufficient sample size for the evaluation.

The two remaining sites met all the criteria developed to guide site selection (see box below).

The two selected AAI grantees, South Seattle Community College and Central New Mexico Community College, met all desired site criteria for implementation. Both:

- Were willing to participate in the study.
- Have a training program that leads to entry into an NTO for women.
- Have specific goals for recruiting minority populations, including women, into their programs.
- Have data collection systems in place to capture necessary baseline and outcomes information for study participants.
- Have capacity to take in any influx of new participants due to the demonstration's outreach intervention.
- Have local workforce partners willing to share the contact information of female jobseekers who will be the analytic sample for the evaluation.

2.3 CONTENT DEVELOPMENT PROCESS

The multi-pronged outreach intervention required development of both women-themed treatment and generic control recruitment content for a selection of outreach modes. The evaluation team worked with DOL and the TWG to identify recruitment themes that address the barriers of awareness and misperception by highlighting the benefits of, and correcting the misperceptions about, NTOs. Based on these discussions, the five selected themes for further consideration were the following:

1. Higher wages in NTOs.
2. Taking pride in the work product.
3. Women in NTOs as role models.
4. Work-life balance.
5. Countering NTO misperceptions.

The evaluation team then worked to create messages that aligned with each theme, and developed initial mock-ups to present the different themes and messages. The next steps in this process were to customize the mock-ups for each of the two grant programs and adapt them to the different outreach modes. At every step, we worked to develop content (text and images) that highlighted the recruitment themes and provided easy-to-grasp information on the different NTO training programs.

The evaluation's generic control content was designed to be as similar as possible to the intervention content, except that it was not targeted towards recruiting women, and thus did not include the specific recruitment themes chosen for the intervention. The content development process, including how content was customized for the specific training programs and behavioral techniques were incorporated, is described in Chapter 4.

CHAPTER 3: DEMONSTRATION AND EVALUATION DESIGN

The treatment associated with the NTO demonstration is designed to create greater awareness of NTO occupations among women, correct women's misperceptions about NTOs, and encourage women to consider NTO careers. The evaluation design is an RCT, in which a sample of women is randomly assigned to either the women-themed treatment group (who receive materials specifically designed to encourage women to enter and remain in NTO careers), or the generic control group (who receive a generic set of materials that do not target women particularly or mention characteristics that might make NTOs particularly attractive to women). Thus, the demonstration develops and distributes two distinct sets of recruitment content for each of the outreach modes (emails, a postcard, and a website) depending on treatment/control status. After these initial outreach efforts, however, both treatment and generic control group members fill out an identical form noting their interest in training for NTO careers and receive the same training provider follow-up.

In this chapter, we present overviews of the two AAI grantees chosen as the sites for the NTO recruitment demonstration—the South Seattle Community College Consortium (South Seattle) and the Central New Mexico Community College (Central New Mexico). We also describe the general demonstration and evaluation design for the study.

3.1 GRANT PROGRAM OVERVIEW

3.1.1 South Seattle Community College

South Seattle is working with its partners to implement the Partnership for Advanced Technology Apprenticeships in Manufacturing and Marine Engineering (PATAM) program. The Partnership aims to create three new apprenticeship programs and expand 12 existing programs in advanced manufacturing, construction, and marine engineering. These programs, together, intended to serve at least 1,000 apprentices. The main goal is to scale and sustain apprenticeships by focusing on both ends of the apprenticeship pipeline (entry into apprenticeships at one end and employer hiring at the other).

To improve *pathways into apprenticeships*, the Partnership will develop common competencies for advanced manufacturing and construction pre-apprenticeships, implement new and revised pre-apprenticeship programs, and create an apprenticeship navigator system. To *improve and expand its employer base*, the Partnership will pilot and demonstrate the effectiveness of on-the-job-training consultants, work to introduce new employers to apprenticeship, and use employer feedback to enhance training curricula.[19]

Exhibit 3.1 shows how South Seattle's PATAM approach satisfies the NTO demonstration's site selection criteria (as listed in Chapter 2).

[19] South Seattle Grant Summary, https://www.dol.gov/opa/media/press/eta/20150909/Wash%20-%20South%20Seattle%20College.pdf. Accessed on 03/08/2018.

Exhibit 3.1: PATAM Program Summary

Site Selection Criteria	PATAM Characteristics
Target Industry	PATAM is providing training in advanced manufacturing and construction, both NTOs for women.
Target Population	PATAM is planning to recruit and serve at least 300 women and other minority populations for its training programs.
Training Providers	PATAM training providers are offering pre-apprenticeship programs and other entry-level training and education opportunities appropriate for low- to medium-skilled participants.
Sample Size	PATAM is being implemented in the Seattle metropolitan area, which provides a large sample of women for the evaluation.
Data Availability	Washington Department of Employment Security, the Washington State Workforce Agency (SWA) has entered into a data sharing agreement with IMPAQ and is providing the required jobseeker contact and demographic data.
Grantee and Partner Buy-in	The grant lead and training provider partners have committed to supporting the study activities.

The decision to target low-to-medium skilled women through this demonstration influenced our decision to recruit for pre-apprenticeship and other entry-level training programs. Our target population would likely not have the existing skills required to enter an apprenticeship program directly.

Training Partners. The evaluation team is working directly with South Seattle's three training partners to implement the demonstration in that site: Apprenticeship & Nontraditional Employment for Women (ANEW), Aerospace Joint Apprenticeship Committee (AJAC), and Clover Park Technical College (CPTC). These partners were involved in developing the recruitment content and are now supporting specific demonstration and evaluation activities. As shown in Exhibit 3.2, as part of the AAI grant, all three of South Seattle's training partners offer entry-level training or educational options that will enable low-to-medium skilled women to enter the fields of advanced manufacturing or construction. The specific demonstration and evaluation activities the training providers will support are described in Section 3.2 and Chapter 4. The training providers are all located within the Seattle-Tacoma metropolitan area (see Exhibit 3.3), making each a viable option for anyone living in this region of Washington State.

Exhibit 3.2: Programs Offered by PATAM Training Partners

Training Provider	Training/Education Program
Apprenticeship & Nontraditional Employment for Women (ANEW)	ANEW, a women-focused training and support services provider, is offering a women-only pre-apprenticeship program in construction and advanced manufacturing.
Aerospace Joint Apprenticeship Committee (AJAC)	AJAC, an aerospace and advanced manufacturing registered apprenticeship program, is offering a pre-apprenticeship program in aerospace and advanced manufacturing.
Clover Park Technical College (CPTC)	CPTC, a community/technical college, is offering an entry-level training program called the Fundamental Skills for Manufacturing and Engineering or FSME.

Exhibit 3.3: South Seattle Training Provider Locations

1. Apprenticeship & Non-Traditional Employment for Women (ANEW)
2. Aerospace Joint Apprenticeship Committee (AJAC)
3. Clover Park Technical College (CPTC)

3.1.2 Central New Mexico Community College

Central New Mexico is implementing the New Mexico Information Technology Apprenticeship Program (NMITAP), which offers On the Job Learning (OJL) and Job Related Technical Instruction (JRTI). This combination aligns with five information technology (IT) career paths: 1) IT Developer, 2) IT Security, 3) IT Systems, 4) IT User Support, and 5) Health IT. Central New Mexico is providing the JRTI directly and is working with a range of local employers to offer the OJL or apprenticeship opportunities. A major goal of NMITAP is to help employers in the Albuquerque metropolitan area meet their growing need for IT workers.[20] Exhibit 3.4 shows how the NMITAP's program summary satisfies the NTO demonstration's site selection criteria (as listed in Chapter 2).

Exhibit 3.4: NMITAP Program Summary

Site Selection Criteria	NMITAP Characteristics
Target Industry	NMITAP is providing training in Information Technology, an NTO field for women.
Target Population	NMITAP is working to recruit 65% of program participants from under-represented populations including women.

[20] Central New Mexico Grant Summary, https://www.dol.gov/opa/media/press/eta/20150909/N.M.%20-%20Central%20New%20Mexico%20CC.pdf. Accessed on 03/08/2018.

Site Selection Criteria	NMITAP Characteristics
Training Provider	NMITAP is offering entry-level training and apprenticeship opportunities appropriate for low-to-medium skilled participants.
Sample Size	NMITAP is being implemented in the Albuquerque metropolitan area, which provides a large sample of women for the evaluation.
Data Availability	The New Mexico Department of Workforce Solutions (DWS) signed a contract with IMPAQ. While not sharing personally identifying information (PII), including contact information needed to reach a sample of women, DWS is conducting the demonstration outreach and providing de-identified data on initial demonstration outcomes.
Grantee and Partner Buy-in	The grantee is committed to supporting the study activities.

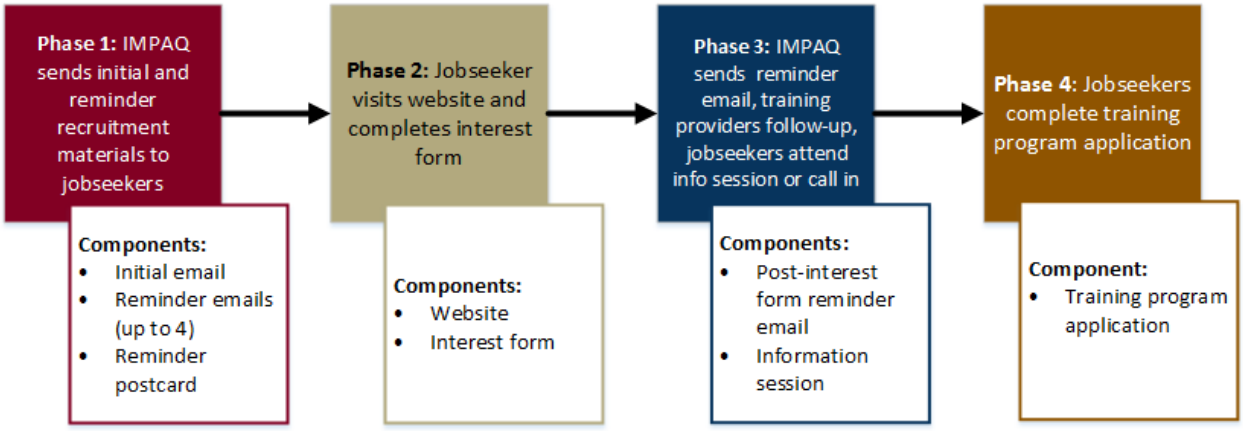
On behalf of DOL, the evaluation team is working with Central New Mexico and New Mexico Department of Workforce Solutions, the New Mexico State Workforce Agency (SWA), to implement the demonstration and evaluation in that site. Demonstration activities include developing the recruitment content and currently involve collecting data on specific evaluation outcomes. New Mexico SWA preferred not to share jobseekers' contact information and agreed to conduct the demonstration outreach in that site and collect data on specific evaluation outcomes. Central New Mexico Community College is the sole training provider under this grant, and training is readily accessible to jobseekers living in northern Albuquerque (see Exhibit 3.5).

Exhibit 3.5: Central New Mexico Community College Location

3.2 DEMONSTRATION DESIGN

The NTO outreach demonstration design has four phases, as shown in Exhibit 3.6. This section describes the activities and demonstration components associated with each phase. We also outline the outreach modes used, as well as the actions taken by the evaluation team, the training providers, and the jobseekers. While the demonstration is currently being implemented at each site in very similar ways, certain design differences were incorporated to ensure it was customized to the specific characteristics of each site's grant, as noted below.

Exhibit 3.6: Multi-pronged Outreach Demonstration Phases



Phase 1: **The evaluation team sends the initial recruitment email, up to four reminder emails, and a final follow-up postcard (each in two versions, depending on the jobseeker's treatment/control status) to the jobseekers in the study sample**:

- **Initial Email**. The initial email provides information on NTO industries and their benefits, as well as the specific grant training programs available at the site. The content is differentiated: the treatment group receives information highlighting NTO-related themes directed specifically at women and the control group receives information with generic content. This email also encourages recipients to visit the appropriately linked (women-themed treatment or generic control) demonstration website that provides more information.
- **Follow-up/Reminder Emails.** The evaluation team sends up to four follow-up/reminder emails to recipients.[21] These emails provide information similar to that in the initial email using new content. For example, email reminders sent to the women-themed treatment group emphasize additional NTO-themes encouraging women to visit the training program website and complete an interest form.
- **Follow-up/Reminder Postcard.** For the last step in phase 1, the evaluation team sends a postcard reminder. The two versions of this postcard repeat the information provided in

[21] Individuals in South Seattle's sample receive four reminder emails and individuals in Central New Mexico's sample receive three reminder emails. This difference is due to New Mexico SWA's budgeting and administrative constraints.

the emails and provide the link to the appropriate demonstration website.[22] This step aims to reach individuals who do not regularly check or use the email account we have for them, by providing them with the same information through a different outreach mode.

Phase 2: **The jobseeker visits the appropriate (treatment or control) website and completes an interest form.** As noted above, the Phase 1 outreach (women-themed treatment or generic control) directs recipients to the appropriate demonstration website given their treatment/control status. The website includes more detail on NTO industries, jobs available, and the benefits of those jobs, including pay. The website also provides details about available training programs, including start dates and program services. Both websites also direct visitors to complete the interest form, which is the same on both websites (see Exhibit 3.7).[23]

Phase 3: **The evaluation team sends post-interest form reminder emails to individuals who complete the interest form, training providers follow-up with individuals who complete the interest form, and jobseekers gather more information about the program.** In this phase, emails are sent to individuals who completed the interest form, reminding them to attend the training program information sessions and to take other necessary steps toward applying to the program. Training providers are notified when a jobseeker fills out an interest form related to their program. Then, they follow up with individuals expressing interest, provide them with more in-depth program information, outline the application steps required, and tell them when and where information sessions on the training programs will happen. Final email reminders are also sent prior to the enrollment deadline, encouraging recipients to complete the interest form and/or attend an information session.[24]

Each training provider holds information sessions prior to beginning the training program, which both treatment and control group members attend. During these sessions, training provider staff talk to attendees about what the training entails, program requirements, and the application process.

Phase 4: **Jobseekers complete the program application.** Each demonstration phase encourages individuals to take specific actions leading to completing an application to a training program. These actions equate to the outcomes associated with each phase of the demonstration, as detailed in the next section.

[22] Only non-respondents in South Seattle's sample will receive a postcard but all individuals in Central New Mexico's sample will receive a postcard. This difference is due to New Mexico SWA's administrative procedures in Albuquerque.

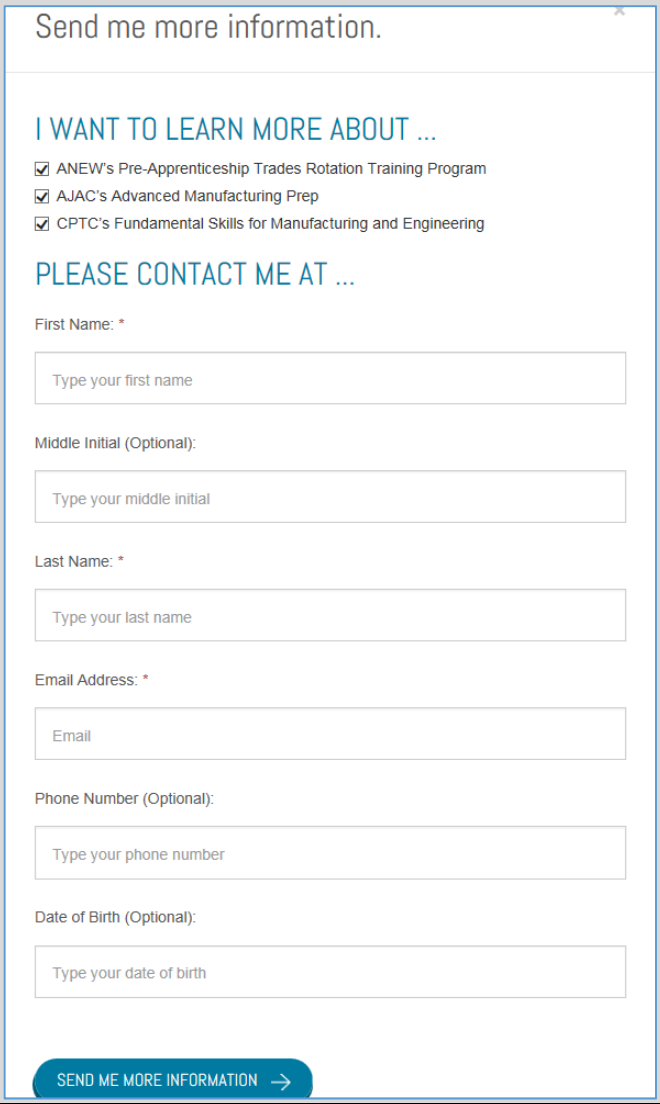
[23] Individuals in South Seattle may also select among the three programs they want to learn more about; Central New Mexico offers only one training program.

[24] In South Seattle, two different reminders are sent: one version to sample individuals who already completed the interest form, the other to those who did not complete it. In Central New Mexico, the same final reminder email is sent to all sample individuals.

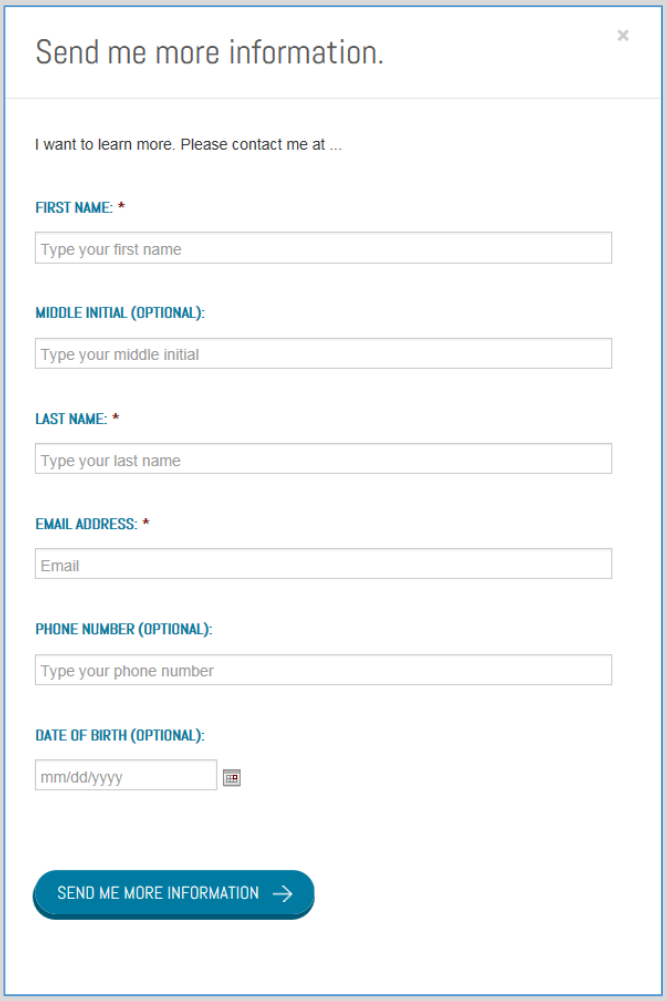
After completing an application to one or more of the training programs, individuals may enroll in the program, or sometimes be referred to a non-demonstration training program more appropriate to their skills or interests.

Exhibit 3.7: Demonstration Interest Forms

South Seattle Interest Form



Central New Mexico Interest Form



3.3 EVALUATION DESIGN

The overall summary of the evaluation design in Exhibit 3.8 includes the anticipated outcomes for each phase listed as steps 1 to 4. As shown, the first step randomizes selected females registered with the state workforce system (study sample) into either the women-themed treatment or the generic control group. Randomization, in Step 1, ensures that any differences in observed outcomes are attributed solely to the recruitment strategies that constitute the treatment. Each group is either further exposed to the women-themed treatment or the generic control recruitment content associated with each of the four demonstration phases.

The analysis for the evaluation will compare the differences between the two groups on short-term behavioral outcomes—numbers (1), (2), and (3) in Exhibit 3.8 (Open an Email, Click on Link, Complete an Interest Form). Two longer-term outcomes will also be explored—numbers (4) and (5), which refer to gathering more information on the training program and applying for the training program, respectively. This section describes how the evaluation will use this information to measure the effectiveness of the intervention.

3.3.1 Research Questions

The NTO study addresses two research questions:

1. Is women-themed recruitment content more effective in encouraging women to take short-term steps towards applying to an NTO training program compared to generic recruitment content?
2. Do responses to these messages vary across different subgroups of women (age, race, ethnicity, education, etc.)?

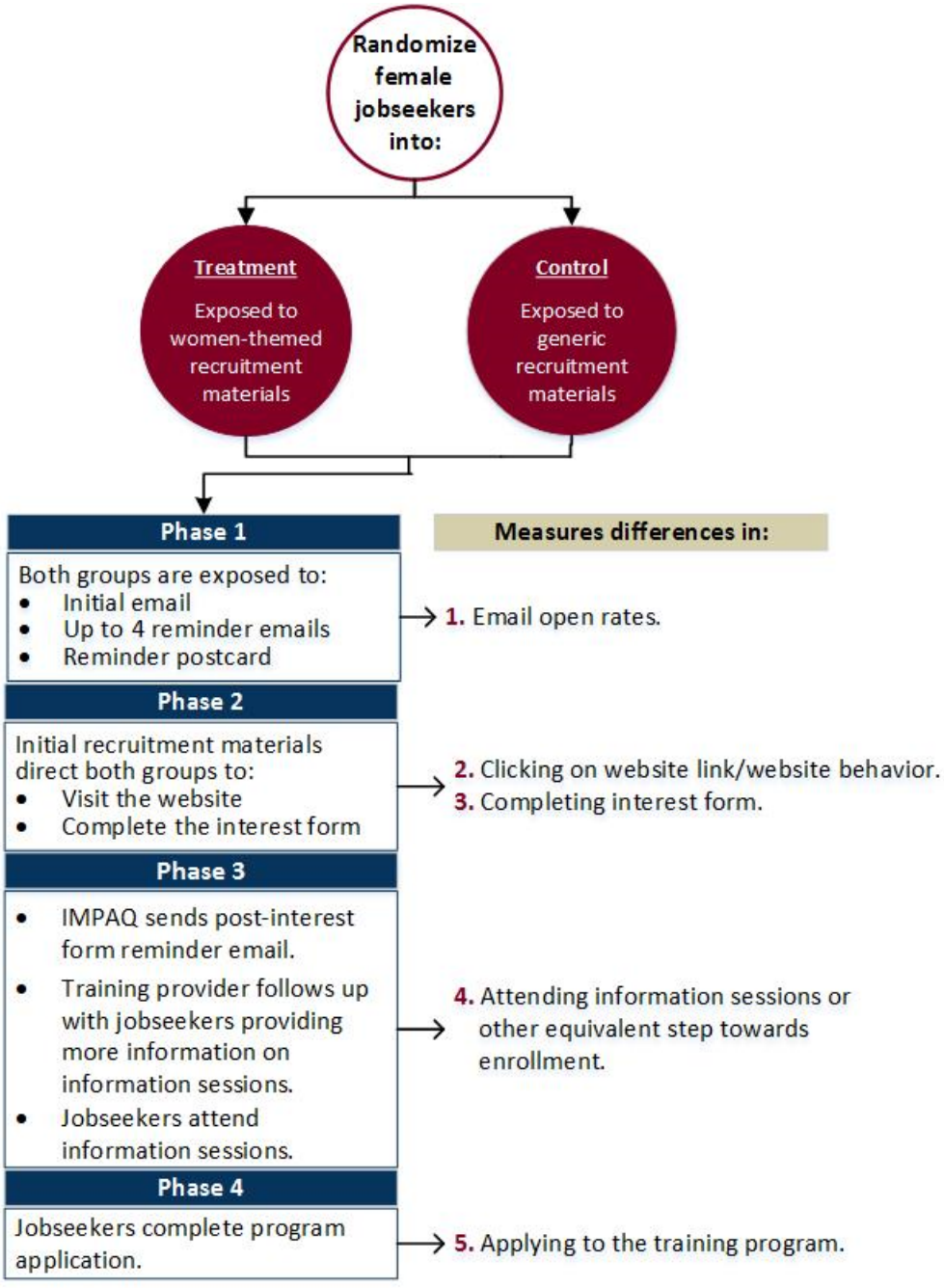
The results will provide the first rigorous evidence on the value of using women-themed recruitment content to encourage women to seek training in NTOs. Study findings will inform future efforts to recruit women into NTOs and help workforce and training provider practitioners seeking to meet the mandatory equal opportunity federal requirements described in Chapter 1 (Public Law 109-270 and 113-128).

3.3.2 Random Assignment

Random assignment was selected as the evaluation methodology because it ensures that no systematic differences exist between the treatment and control groups. Any treatment-control differences in confirmatory outcomes (as described in Section 3.3.3) can be attributed to the intervention itself with a known degree of statistical confidence.

Random Assignment Procedures. Individuals are randomly assigned to either the women-themed treatment group or the generic control group through a batch randomization process that gives each individual a 50% chance of being assigned to the treatment or control group. Since the demonstration is being implemented in two cohorts, Fall 2017 and Spring 2018, the randomization will be conducted in two cohorts, once before each demonstration wave. Randomization for each cohort is performed 9-10 weeks before the start of a training session (details on how the demonstration and evaluation timelines were developed are discussed in Chapter 4, while detailed timelines by site can be found in Appendix C). Over the course of the demonstration (June 2017 to March 2018), the evaluation team will randomly assign about 20,000 jobseekers from Central New Mexico and 15,000 from South Seattle.

Exhibit 3.8: Evaluation Design Summary



Maintaining Integrity of Random Assignment

One of the most critical aspects of implementing the NTO demonstration is maintaining the integrity of random assignment (ensuring the treatment and control groups do not receive the other group's intervention). Should such integrity be compromised, the outcomes measured in the evaluation can no longer be attributed solely to the treatment intervention.

The evaluation team took three major steps to ensure the treatment group received only the women-themed treatment recruitment content and the control group only the generic control recruitment content:

- Mass modes of recruitment (such as posters) were excluded because they could not be controlled as a treatment component.
- Treatment emails were linked only to the treatment website, and control emails only to the control website.
- The websites were not accessible by search engines, to prevent treatment and control group members from ending up on the other group's website accidentally through search engine results.

The evaluation team also performs three checks during implementation, to ensure no crossover between the treatment and control groups:

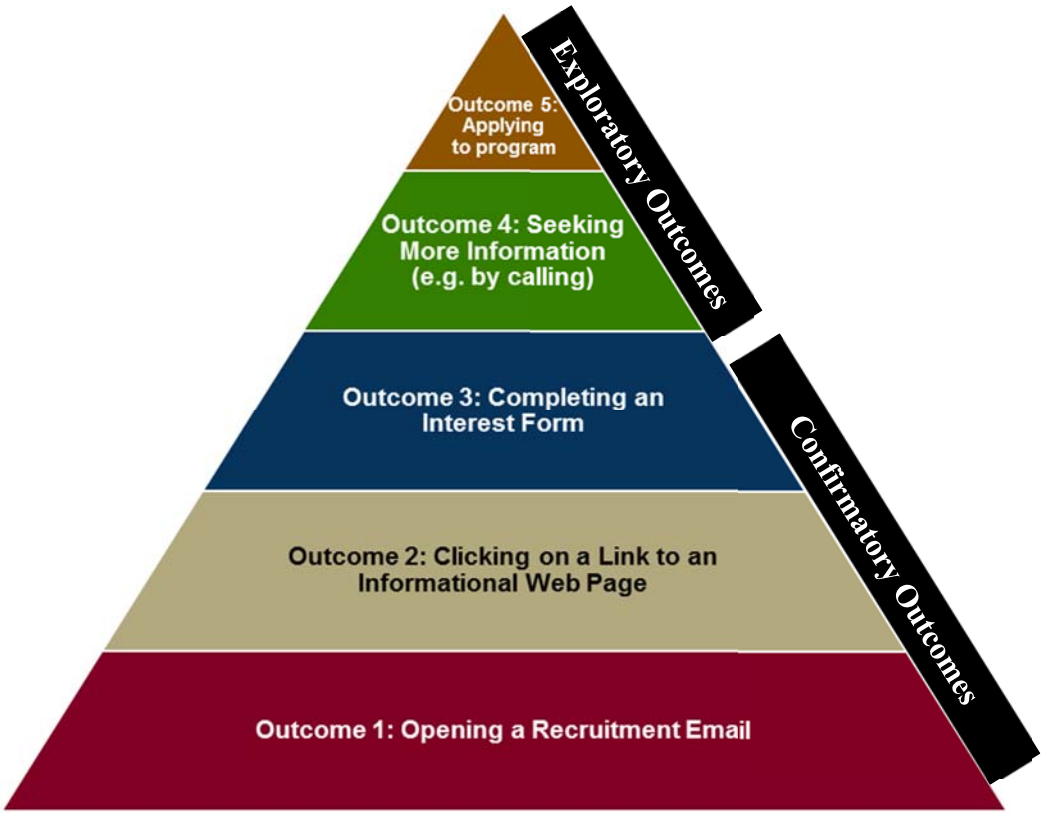
- Conducts thorough quality assurance checks of demonstration procedures to ensure all recruitment emails were consistently delivered to the correct group.
- Monitors interest form completers on a weekly basis to ensure their completed forms are on the appropriate website and correspond to their originally assigned treatment/control group status.
- Monitors outcome completion rates throughout, investigating any anomalies to ensure crossover is not the cause.

The evaluation team has not detected any signs of systematic crossover to date.

3.3.3 Evaluation Outcomes

Exhibit 3.9 presents the study's evaluation outcomes, categorized as confirmatory or exploratory. Confirmatory outcomes — (1), (2), and (3)—are those for which we can estimate the impact of the intervention with known statistical confidence, given sample size, available data, and study constraints. Exploratory outcomes — (4) and (5) — are those for which we can look for suggestive relationships in the data, but for which we expect additional testing will be required to draw confident conclusions about the intervention's impact.

Exhibit 3.9: Evaluation Outcomes



- **Outcome (1), confirmatory:** Opening the initial or reminder recruitment emails.
- **Outcome (2), confirmatory:** Clicking on a link to the demonstration's web page.
- **Outcome (3), confirmatory:** Filling out an interest form on the website expressing interest in one of the AAI grant programs.
- **Outcome (4), exploratory:** Seeking more information on the program—such as attending an information session, calling for more information, or meeting with a program representative.
- **Outcome (5), exploratory:** Applying to the demonstration training program or equivalent service.

Outcomes (4) and (5) are considered to be exploratory for two reasons:

- First, it is unlikely that there will be sufficient precision to confidently report the impact of the intervention on these later outcomes (i.e., less statistical power, given sample size constraints). Therefore, we will only be able to detect differences between the treatment and control groups for outcomes (4) and (5) if a large number of jobseekers complete these outcomes, allowing us to make robust statistical inferences.
- Second, an intervention that is restricted only to *recruitment* may not directly impact longer-term outcomes—such as attending an information session, contacting the training provider, and most importantly, completing an application for a program.

Since these outcomes are further removed from the intervention itself, they are more likely than earlier outcomes to be impacted by non-intervention influences (such as interactions with training program staff, or with family and friends) that might also affect an application decision.

3.3.4 Data Sources & Collection

The study calls for three main types of data on the study sample:

1. State Workforce Participant data
2. Confirmatory Outcomes Data
3. Exploratory Outcomes Data

State Workforce Participant Data. The demonstration and evaluation rely on jobseeker contact and demographic information on women in the demonstration areas for several purposes: (1) to select a study sample of participants for the demonstration, (2) to extract baseline data for that study sample, and (3) to compile contact information, such as emails and home addresses, for distributing the recruitment content to the study sample. We worked with the South Seattle and Central New Mexico SWAs to access jobseeker contact information for all females who received workforce system services within the local area.[25]

All study data were derived from either program data already collected by demonstration partners (i.e., data that would have been collected by demonstration partners independent of the demonstration or evaluation) or data generated as a result of implementing the demonstration and collected independent of demonstration partners.

To maximize the statistical power of the demonstration, all females with a valid email or home address who received workforce system services within the past 14 months in Seattle and 18 months in New Mexico are included in the study and randomly assigned to either the women-themed treatment group or generic control group. [26]

A crucial difference between the South Seattle and Central New Mexico sites is that the Washington SWA was willing to share all jobseeker data required for the demonstration, enabling us to conduct the outreach and collect data on all confirmatory outcomes. For the Central New Mexico demonstration, the SWA chose not to share the jobseeker contact information and

[25] New Mexico Department of Workforce Solutions, Albuquerque for Central New Mexico; Employment Security Department, Seattle and the surrounding areas for South Seattle.

[26] Eligibility criteria for South Seattle's sample differed from New Mexico's in two ways: (1) in Seattle, individuals were selected based on their registration data rather than their last login date, due to data availability; and (2) in Seattle, individuals were selected from the past 14 months rather than 18 months, due to unavailability of data earlier than 14 months prior to the demonstration due to recent data migration.

instead conducted outreach on their end, with the evaluation team's guidance and support. The main implication of this difference for the evaluation is that the SWA in New Mexico, rather than the evaluation team, collects data on outcomes 1 and 2.

For both sites, the sample selection process involves the following steps:

- Eliminating duplicated individual records in the data set, using SSN and full name;
- Removing individual records of women who either: (1) registered for a workforce systems account more than 14 months earlier (South Seattle), or (2) logged into their workforce system account more than 18 months earlier (New Mexico);
- Removing individual records of women who have already been randomly assigned in a previous cohort;
- Removing individual records of women with no email address or home address listed;
- Running all remaining email addresses through a third-party validation service, and removing those individual records with email addresses are flagged as invalid and who have no mailing address listed.

For South Seattle, the evaluation team performs all these steps. For Central New Mexico, the SWA performs them. After the sample for each cohort has been determined, the cohort sample is

3.3.3 *Confirmatory Outcomes: Open Email (1), Visit Webpage (2), Complete Interest Form (3).*

For both sites, the three confirmatory outcomes are tracked using analytics available from email distribution software and built-in website analytic tools, which track whether each email is opened. In addition, each email has the appropriate unique link to either the women-themed treatment or generic control website, which allows the website's analytic tools to track who visited the website.

As noted, however, data on outcomes (1) and (2) are collected by different organizations. For South Seattle, the evaluation team tracks these outcomes directly. For Central New Mexico, the SWA collects the data on outcomes (1) and (2) as part of conducting the demonstration outreach, and then transfers the data to the evaluation team. For outcome (3), the evaluation team tracks the relevant data for both sites without site involvement.

All data transferred between demonstration sites and the evaluation team occurred through secure FTP to ensure confidentiality and security.

Exploratory Outcomes: Gather More Information on the Program (4), Apply to Program (5). Since interested jobseekers reach out directly to the training providers, both grantee sites collect these data as part of implementing the demonstration, and then transfer the data to the evaluation team on an agreed-upon schedule. The study team links attendance and

application/enrollment records to the original sample using identifiers such as name, contact information, and Social Security Number (SSN).[27] Although SSNs are the ideal identifier, the grantees do not collect it for outcome (4). For this outcome, we must use alternate identifiers and conduct manual checks for matches. A string matching process with imperfect identifiers (like this one) is prone to erroneous false positive (incorrectly identifying a match) and false negative matches (incorrectly not identifying a match). To address this, we examined all possible matches derived from alternative identifiers, such as last name, date of birth, email address, or phone number to determine which matches to accept or reject. After identifying all matches, we recorded any applicable outcomes achieved for individuals in our original sample. Not all individuals were matched back to our original sample, since AAI grantees were also recruiting from other sources; thus, identifying and dropping records without a match is appropriate.

[27] For Central New Mexico, the evaluation team shares attendance and application/enrollment records with the New Mexico SWA and the SWA, in return, matches the data back to the study sample.

CHAPTER 4: DEMONSTRATION PREPARATION AND IMPLEMENTATION

Following site selection, the evaluation team worked with the two demonstration sites and their partners to customize the outreach content and demonstration implementation plans for Cohort 1. Once the demonstration began, we worked to collect, clean, and analyze data required for the evaluation, and when necessary, made mid-course adjustments to ensure implementation went as planned. To date, the communication and outreach modes for the first of two cohorts in each demonstration site were implemented. This chapter outlines the steps followed to prepare for and implement the demonstration and its evaluation design, as well as challenges and lessons identified along the way.

4.1 PREPARING FOR THE DEMONSTRATION

The two major activities involved in preparing for the demonstration in both sites were developing recruitment content and outlining the specific implementation plans for each demonstration site. As noted above, both sites followed very similar demonstration designs. Site program differences led to some minor differences in content, as further noted in the following description.

Developing Recruitment Content. Exhibit 4.1 presents an overview of number of different types of content prepared for each outreach mode for each demonstration site. The evaluation team developed emails for each demonstration site that consisted of treatment and control group versions of the initial, reminder, and follow-up emails. In addition, each of the two websites (women-themed treatment and generic control) for each of the two demonstration sites includes a home, industries/industry, Find a Program/About Program, and Frequently Asked Questions (FAQs) page. The women-themed treatment group websites also include an additional page titled "Her Story," which provides testimonials from women that work in the NTOs. All websites had a copy in both English and Spanish.

Exhibit 4.1: Number of Different Types of Outreach Content Developed by Mode and Demonstration Site

Site	Number of Emails	Number of Postcards	Number of Websites
South Seattle			
Women-themed	7	1	1 (English & Spanish), 5 pages
Generic	7	1	1 (English & Spanish), 4 pages
Central New Mexico			
Women-themed	6	1	1 (English & Spanish), 5 pages
Generic	6	1	1 (English & Spanish), 4 pages
Total	**26**	**4**	**4**

The different components of content development include three parts: industry alignment, behavioral techniques, and treatment/control differences.

Industry Alignment. We customized all content to align with the industries specific to each demonstration site (IT for Central New Mexico and advanced manufacturing and construction for South Seattle). The recruitment materials provided detailed information on the industries, including job type available and entry-level wages. We also included personal testimonials from individuals currently working in the industries and descriptions of each training program, as well as dates and locations of the training sessions. Finally, we highlighted any specific program benefits (such as free tuition and available support services).

Behavioral Techniques. We incorporated a set of behavioral techniques (nudges) that aim to encourage completion of the short-term outcomes (such as completing an interest form). We chose the following applicable and evidence-based behavioral techniques from the existing literature (US-DHHS 2015; US-DHHS 2016; DARLING ET AL; CHOJNACKI ET AL):

- **Implementation Prompts** – Prompts that assist people in planning next steps or forming intentions. We incorporated these into our materials using checklists that outline the steps for getting more information and applying to the program.
- **Deadlines** – Deadlines to encourage action. We included deadlines for applying to the programs in all the materials.
- **Personalization** – Communications that incorporate recipient-specific information. We incorporated the recipient's name into all email communication.
- **Highlighting Benefits** – Content that frames a next step as a way to gain a benefit. In many cases, we noted that if recipients apply to the program they can receive specific benefits (including funding for the training or support services).
- **Urgency** – Language that creates a sense of urgency for taking the next steps. We used language such as "last chance," for example, to create a sense of urgency to take the next step towards applying to the program.
- **Loss Aversion** – Content that frames a next step as a way to avoid a loss. We used language such as "don't miss out," for example, to encourage recipients to take the next step towards applying to the program.

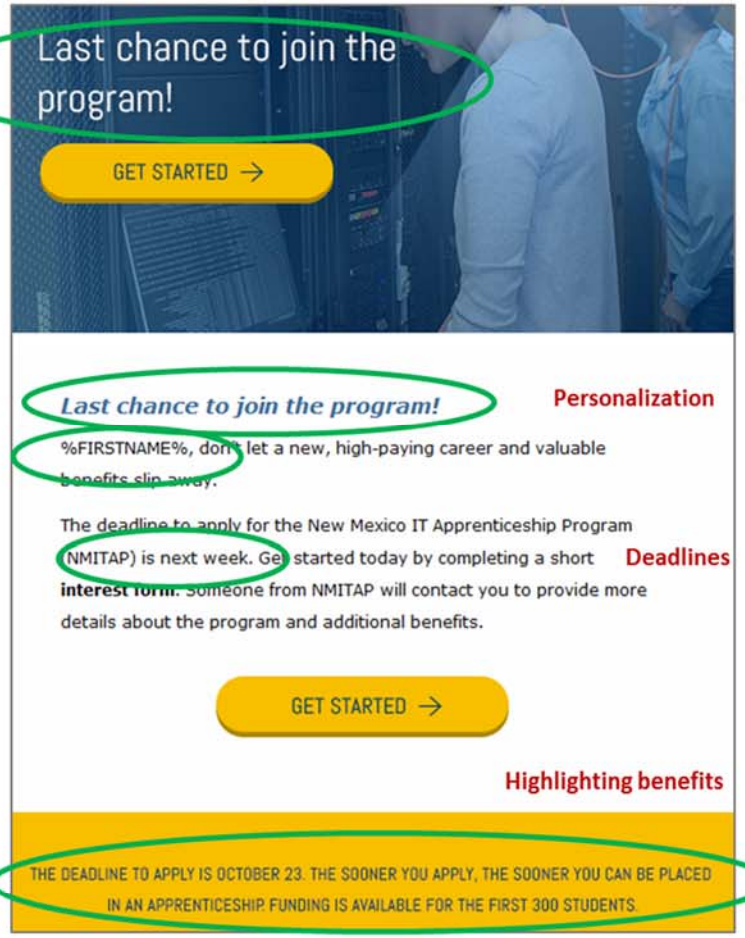
Exhibit 4.2 presents examples of how these behavioral techniques were incorporated into different components of the recruitment content. Although the exhibit highlights these behavioral techniques as used in the treatment content, the same general techniques (though not with the same specific content) were also incorporated into the control content. See Appendix A for women-themed treatment and generic control materials for both sites.

Exhibit 4.2: Behavioral Techniques in Recruitment Content

Postcard:

Implementation Prompts

Email:



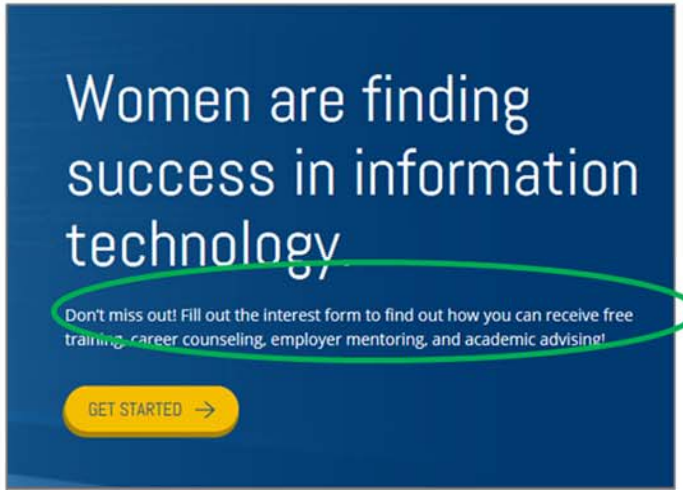
Urgency

Personalization

Deadlines

Highlighting benefits

Website:



Highlighting benefits

Women-Themed Treatment vs. Generic Control Content. The control versions of all content were developed to reflect the types of recruitment materials that would typically be used for recruiting for similar training programs in community/technical colleges. The treatment versions differed in three major ways. First, they included NTO recruitment themes selected to highlight the benefits of careers in NTOs. Second, whereas the vast majority of the photos included in the control content were of men, the treatment content included primarily photos of women. Third, the testimonials in the treatment content highlighted NTO themes to appeal particularly to women—such as higher wages in NTOs, taking pride in the work product, and countering misperceptions about NTOs (see Exhibit 4.3 for examples).

Exhibit 4.3: Example Testimonials by Women-Recruitment Theme[28]

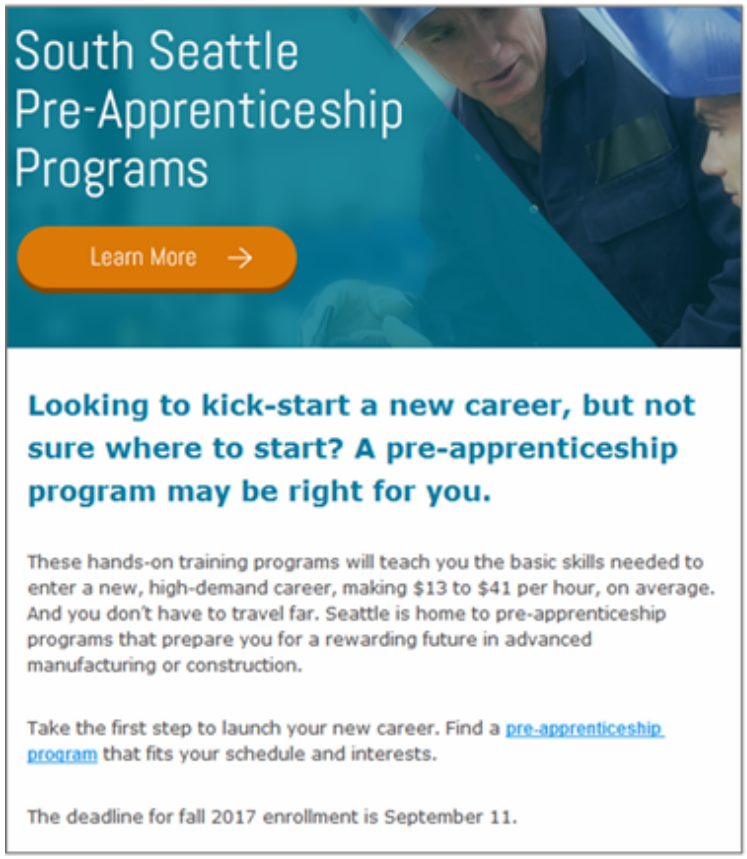
Women-Recruitment Theme	Example Testimonial(s)
Higher Wages in NTOs	▪ "There's security in knowing that — no matter what happens — you have benefits, you have insurance. I'm able to take care of my family without worry." ▪ "Before this, I worked at a blood bank. There was no upward mobility. I was making on average about $30,000 a year. As an electronics technician, I can make up to $53,000."
Taking Pride in the Work Product	▪ "Being in [IT] support, you are supporting the people that need you most — and that is everyone! On a day-to-day basis, we are helping hundreds and hundreds of people." ▪ There's joy and pride in creating something that people have to use every day. I finished working on the 520 Bridge in Seattle that people are going to be driving over. I can take my daughters and show them and say 'your mom helped build that'."
Women in NTOs as Role Models	▪ "I have had a lot of female role models [in this field]." ▪ "Things have changed, there are a lot more women in this field than there used to be."
Work-life Balance	▪ "A lot of IT support work can be done from home. That actually might work better if you can't get a babysitter when your kid is home sick." ▪ "Work-life balance is really important in this industry. I have bosses who value that in their life and mine. Lots of people have families, and we get to work from home two days a week."
Countering NTO Misperceptions	▪ "You don't have to be physically strong to be in construction. Not everything is heavy lifting. In fact, most companies don't want you lifting over 40 to 50 pounds." ▪ "Coding is really creating. You're creating things, and that's really fun!"

Exhibit 4.4 presents examples of how we contrasted the women-themed treatment and generic control group materials. For example, the highlighted selections of the women-themed treatment email include an image of a women working in an NTO and show how NTO themes were incorporated into the content. See Appendix A for women-themed treatment and generic control materials for both sites.

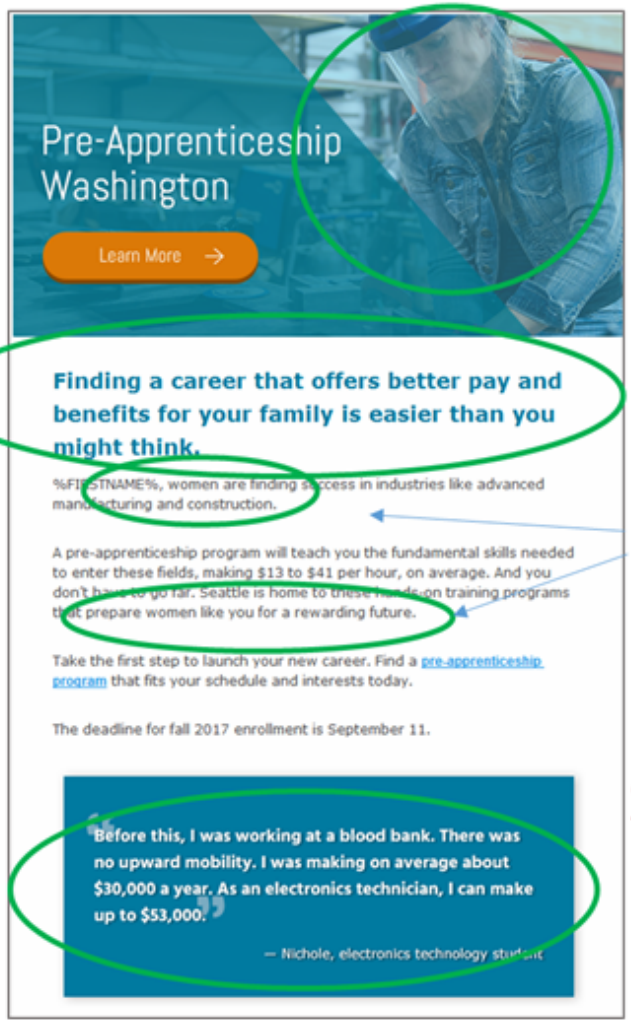
[28] With the grantees' help, IMPAQ conducted phone interviews with less than ten jobseekers that enrolled in the training programs in Central New Mexico and South Seattle.

Exhibit 4.4: Customization of Women-Themed Treatment Group Materials

Generic Control Email



Women-themed Treatment Email



Images of women

Use of NTO theme – Supporting your family

Use of NTO theme – Other women are doing it

Quotes from women in the industry, Use of NTO theme - Wages

The content development process as a whole was extremely iterative, involving extensive information gathering and multiple rounds of review and revisions by the evaluation team, the sites, and their demonstration partners. The information gathered on the industries and the training programs was used to populate the initial versions of the emails, websites, and postcards. For the treatment materials, we then selected recruitment themes geared towards addressing specific awareness barriers to NTOs (as described in Chapter 2)—and developed content that aligned with those themes. The evaluation team reviewed initial and subsequent drafts of all materials, and provided feedback on content, layout, and images. Once the materials were close to final, we shared them with the demonstration sites and their training providers, to enable them to review for information accuracy as well as provide general feedback. We incorporated their comments as appropriate.

NTO Recruitment Themes:

- Higher wages in NTOs
- Taking pride in the work product
- Women in NTOs as role models
- Work-life balance
- Countering NTO misperceptions

Developing the Implementation Plan. While working with the grantees and their partners, the evaluation team reviewed the demonstration steps and discussed appropriate roles and responsibilities for each implementation task. The evaluation team further developed detailed implementation plans for each demonstration site, which involved translating the high-level demonstration steps (sending emails and postcards, collecting interest form data, holding information sessions, etc.) into a detailed step-by-step procedures guide with site specific roles and responsibilities and technical specifications. The process also involved creating implementation timelines, including specific dates for conducting random assignment, sending each email and the postcard, holding information sessions, and sharing evaluation data. The implementation dates for each demonstration activity had to meet the following requirements:

- **Align with Enrollment Deadlines:** All outreach activity had to be completed prior to the training program enrollment deadlines, to allow sufficient time for interested individuals to complete the required steps for applying to and enrolling in the program.
- **Allow for Appropriate Time between Outreach Steps:** Each step in the demonstration had to be spaced out to ensure that individuals in the sample do not receive all materials too close to one another or too far apart. Exhibit 4.5 shows the timing between each demonstration activity, using South Seattle as an example. The timing between activities for the Central New Mexico site was fundamentally similar, though customized to accommodate New Mexico implementation constraints, particularly the enrollment deadline (see Appendix C for the full demonstration timelines for each site).
- **Accommodate Partner Schedules and Availability:** Since specific demonstration phases included demonstration partner activities (e.g., hosting information sessions and sharing information on program participation) that had to be completed at specific points in the process, we needed to ensure all partners were available during their required timeframe.

Exhibit 4.5: General Timeline of PATAM - South Seattle Activities

Activity	Timeline
Confirm enrollment dates for cohort	8 weeks before school enroll deadline
Project lead requests jobseeker data from ESD (due 1 week later)	8 weeks before school enroll deadline
Project lead sends Initial Recruitment Email	6 weeks before school enroll deadline
Project lead sends 1st Reminder Email	5 weeks before school enroll deadline
Project lead sends 2nd Reminder Email	4 weeks before school enroll deadline
Project lead mails Recruitment post-card	3 weeks before school enroll deadline
Project lead sends 3rd Reminder Email	3 weeks before school enroll deadline
Project lead sends 4th Reminder Email	2 weeks before school enroll deadline
Project lead sends post-interest form reminder email to those who have completed interest form	To be sent between 1 week after start of emailing and up to the enroll deadline (emails are sent automatically 1-2 days after completing form)
Project lead sends final reminder email, different versions to those that completed and did not complete the interest form	1 week before school enroll deadline
Deadline to Enroll in School	2 weeks before Class Start Date

The evaluation team and the sites' implementation partners conducted multiple rounds of review to ensure the timeline met all requirements. Once agreement on the general time line was set, we developed site-specific procedure manuals, as described below.

Site Specific Procedure Manuals. For each demonstration site, the evaluation team developed a set of Site-Specific Procedures Manuals (SSPMs) that outlined the implementation timeline and roles and responsibilities for each implementation partner. We then conducted site visits to both sites to train the demonstration partners appropriately. This included reviewing the demonstration procedures as laid out in the SSPMs and gathering the feedback on the outreach materials described earlier. We also gathered more detailed information on each training program, as well as each partner's plans for grant implementation.

Following each site visit, the evaluation team finalized the SSPMs based on what was learned during the visit and shared the final manuals with the relevant partner. The manuals were customized to reflect program differences across sites, including program enrollment deadlines and a data transfer schedule. Appendix D presents SSPMs for training providers in Central New Mexico and South Seattle.

Testing. The final step in preparing for the demonstration was testing, to ensure all programming and procedures worked correctly, all email and website links were functional, and the interest form collected data appropriately. For this test, the evaluation team sent generic control and women-themed treatment emails to approximately ten team members using a condensed timeline (i.e., over the course of two hours), who were expected to perform tasks, such as open

the email, click on a link, fill out an interest form, and unsubscribe to the email list. All tasks were logged into a spreadsheet when completed (e.g., person 1 opened reminder email number 3 and clicked on a link). At the end of the testing period, this information was then compared to information from the system's tracker, issues were identified, and a plan to address them was developed (see Exhibit 4.6 for examples). The testing phase was pronounced complete when a testing round ended without any unresolved issues identified.

Exhibit 4.6: Issues Identified in the Testing and their Solutions

Issue Identified	Solution
Emails going to recipient's spam folder	Making adjustments to the language in the email subject or body to avoid specific words such as "financial freedom" that are often caught by spam filters.
Links in email or website not functioning	Repairing the links and retesting.
Interest form not tracking data	Checking and repairing code, retesting.

4.2 IMPLEMENTING THE DEMONSTRATION

Once the demonstration began in each site, the evaluation team's main activities involved collecting data, monitoring each site to ensure the demonstration was implemented with precision, and providing the demonstration site partners with technical assistance related to their implementation responsibilities. This process resulted in some mid-course adjustments to address issues identified once the demonstration began, as discussed below.

Data Collection. The evaluation team, as noted, required three types of data on the study sample to conduct the demonstration and its evaluation: (1) state workforce participant data (for study sample selection and demographic data on that sample), (2) confirmatory outcomes data, and (3) exploratory outcomes data. The evaluation team worked with the demonstration partners to gather these data both prior to the demonstration and is continuing to do so throughout the study period.

The evaluation team also worked with the SWAs in Washington and New Mexico to access ***state workforce participant data,*** and to prepare the cohort 1 demonstration sample according to our specific agreements with each organization. These data include contact and demographic information on women in the demonstration areas. As noted in Chapter 3, the Washington SWA was willing to share the jobseeker data required for the South Seattle site, enabling the evaluation team to conduct outreach and collect data on all confirmatory outcomes. However, the New Mexico SWA did not share contact information, choosing instead to conduct the Central New Mexico outreach on their end, with our guidance and support. As described below, this had implications for how we gathered outcomes data for the Central New Mexico confirmatory outcomes.

The initial recruitment email sent out for each demonstration site led the evaluation team to begin to collect the ***confirmatory outcomes data* (*Open Email [1], Visit Webpage [2], Complete Interest Form [3]).*** For South Seattle, the evaluation team tracked all three of these outcomes

without assistance from the Washington SWA or the training providers, using in-house analytics derived from email distribution software and built-in website analytic tools. The New Mexico SWA collected data on outcomes (1) and (2), using their own email distribution software and then transferring the data to IMPAQ. The evaluation team tracked the Central New Mexico data for outcome (3) directly, in the same way as for South Seattle.

The evaluation team performed checks on the confirmatory data collected to ensure there were no issues with implementation of the demonstration or the collection of data. These data checks, which included checking for treatment/control crossovers (as discussed in Chapter 3) were especially important for Central New Mexico—given that we did not use our own tracking tools for outcomes (1) and (2). Having completed the first demonstration cohort, we have discovered no data anomalies to date that compromise the integrity of the evaluation.

As individuals began completing interest forms (confirmatory outcome [3]), the evaluation team reviewed and cleaned the data collected through those forms. Those data were shared with the training providers for further follow-up with each interested person, providing them with details on the information sessions and application procedures.

We communicated with the training providers to ensure they conducted the required follow-up with interested individuals and track the required ***exploratory outcomes (Gather More Information on the Program [4] and Apply to Program [5])***. Our communication efforts included regular check-ins with the training providers to verify if the required data[29] is shared according to the specified demonstration timeline. The evaluation team also conducted technical assistance, as needed, to review the data tracking and submission steps and requirement. Little additional technical assistance was required following the on-site training and implementation of the SSPMs.

Monitoring the Demonstration. We engaged with the demonstration partners on a continuing basis to ensure that: (1) all required components were implemented and functioning correctly, and (2) evaluation data were being tracked appropriately. To ensure both the treatment and control groups were sent all appropriate emails, for example, an evaluation team member was included on all email distribution lists for each site. As those emails were received by the registered jobseekers, the evaluation team member checked the functionality of the links in the emails and submitted data on the websites' interest forms to confirm the interest form data were being tracked as required. In addition, we developed "Demonstration Production Reports" as early outcomes data became available. These provided early information on outreach materials delivered to the treatment and control groups and responses to early outcomes—information that would help detect any obvious problems associated with demonstration implementation.

[29] The data related to participant responses. In New Mexico, training providers were supposed to send data on outcome 1 (opening an email), outcome 2 (clicking on link to webpage), outcome 4 (seeking more information/attending information session), and outcome 5 (applying to the program). In South Seattle, training providers were supposed to send data on outcomes 4 and 5. All other outcome data was tracked by the evaluation team.

Mid-Course Adjustments. Based on initial findings for both demonstration sites, the evaluation team made the following mid-course adjustments to improve overall implementation.

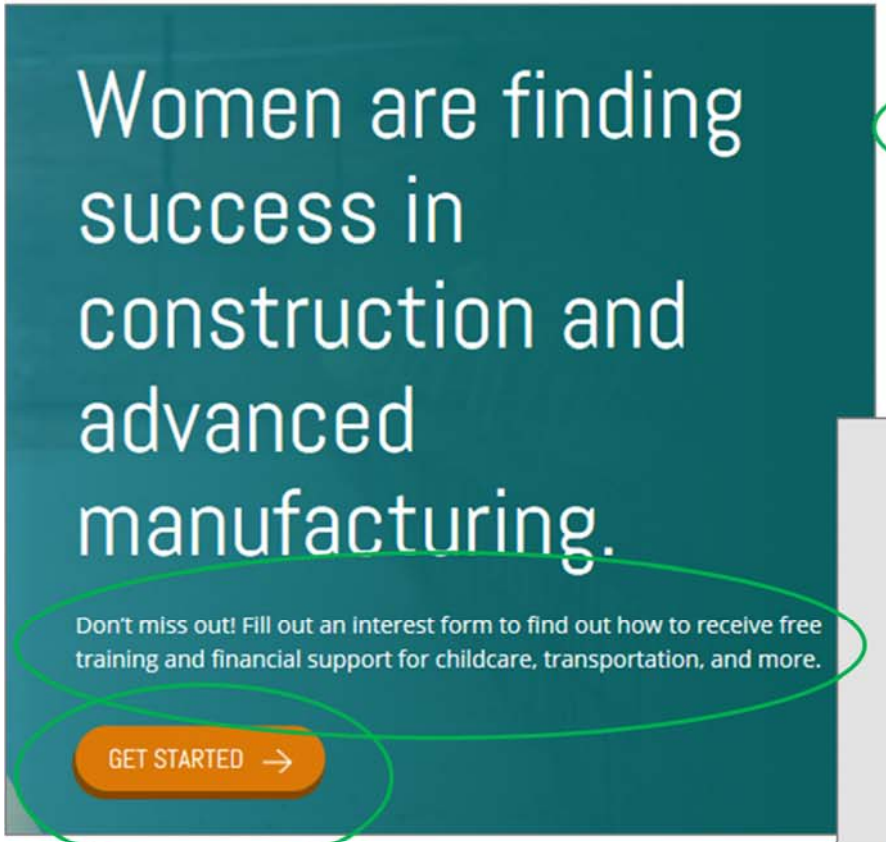
First, early in the implementation of the demonstration in South Seattle, we noted a lower than expected number of individuals completing the interest forms across both treatment and control groups. To address this concern, we made three changes to the recruitment content to push more individuals who opened the emails and visited the website to proceed to the interest form (see Exhibit 4.7). In Central New Mexico, we were able to implement these changes, which we describe below, before the demonstration began in that site. The changes made involved the following:

- Made it easier and faster to complete the interest form, by changing email and website buttons that initially read "Learn More" and linked to the programs page to buttons that read "Get Started" and linked directly to the interest form.
- Added language to the emails and website that provides incentives to participate—such as a chance to receive free training, financial support for childcare, transportation, eligibility for food stamp program—and nudges more women to complete the interest form.
- Made changes to the interest form to make it less burdensome to complete. This included removing fields that were not essential for the demonstration or evaluation.

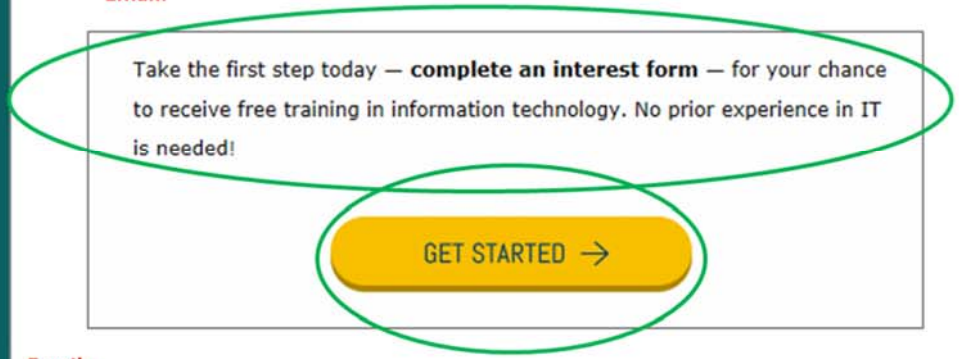
Another change implemented during the South Seattle demonstration was to incorporate the use of Facebook advertisements to help drive the Cohort 1 sample to the program website and increase the number of individuals completing the interest form. We developed both targeted (for the treatment group only) and generic (for the control group only) Facebook ads that aligned with the other recruitment content (See Exhibit 4.8). Since using Facebook ads required the evaluation team to have direct access to sample members' email addresses (which we only had for South Seattle), we could not implement the ads in the Central New Mexico site. Further, Facebook advertising was only used to increase engagement with the recruitment demonstration and was not intended to generate reported outcomes. This was because Facebook does not provide individually-identifiable data on impressions and hits from advertisements.

Exhibit 4.7: Examples of Changes to Outreach Materials to Drive Users to Interest Form

Website:



Email:



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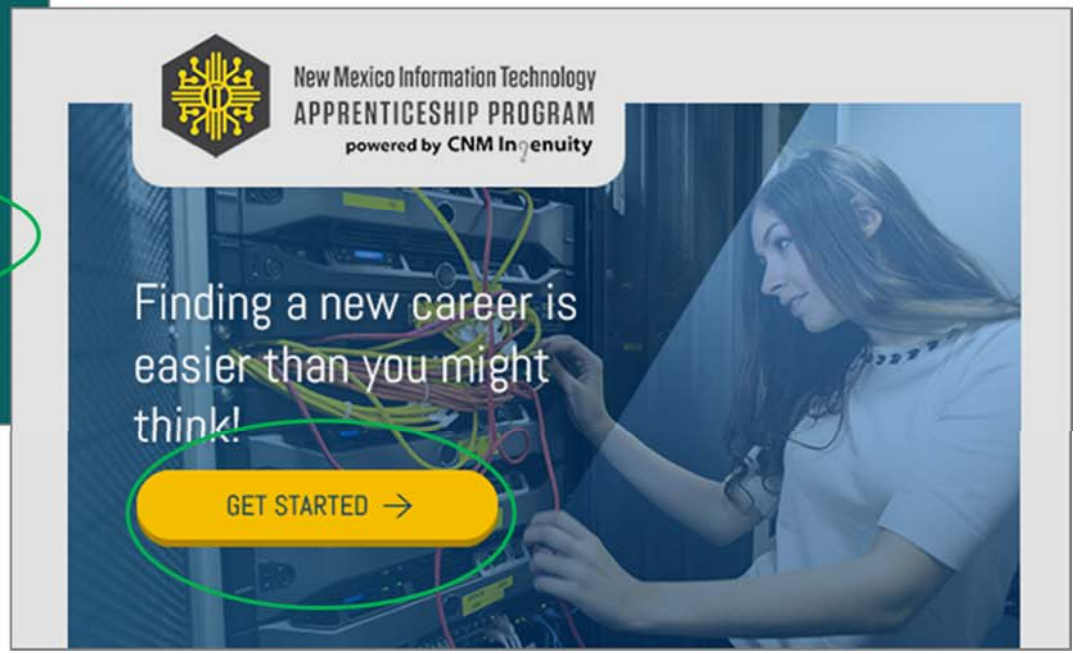
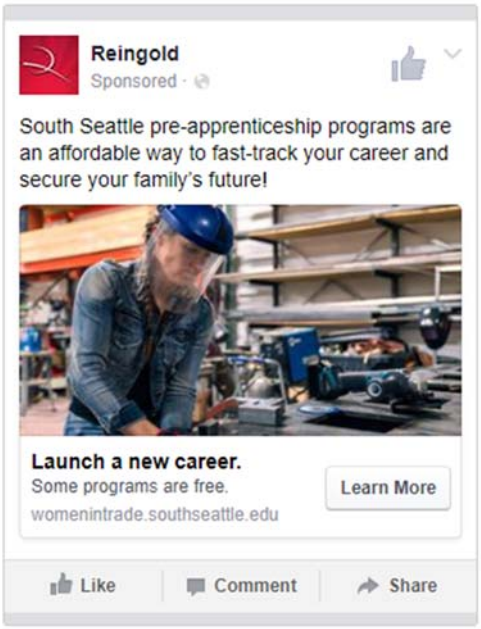
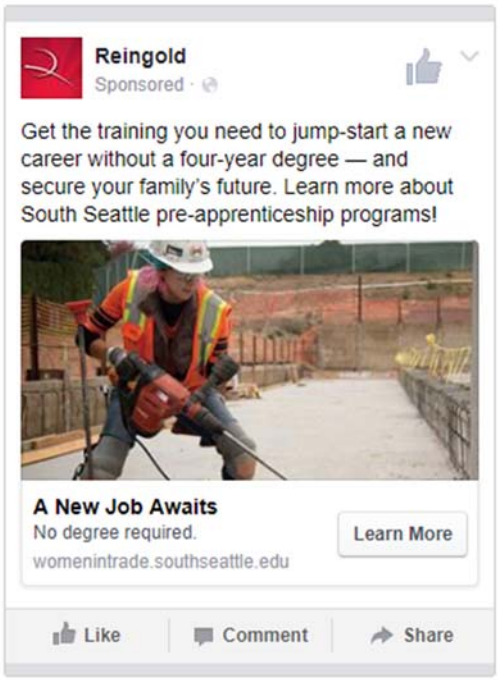


Exhibit 4.8: Example Facebook Ads

Women-Themed Treatment





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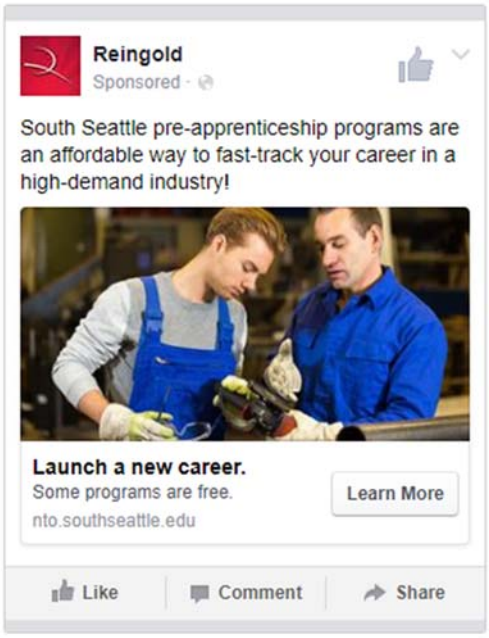

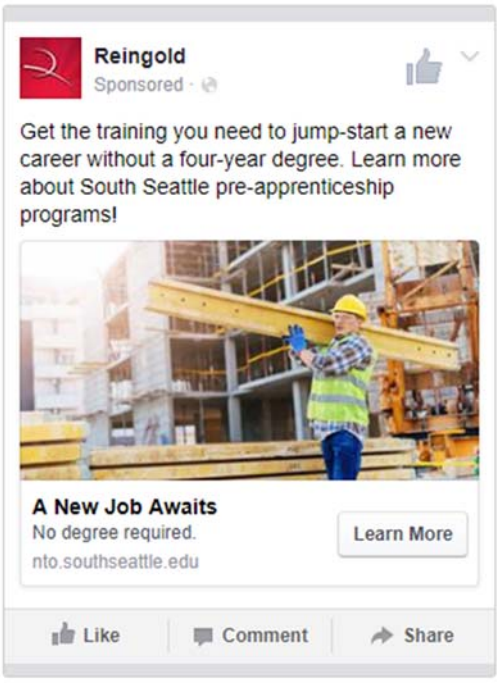

4.3 CHALLENGES AND LESSON LEARNED

The challenges and lessons learned so far in developing and implementing the NTO recruitment demonstration are primarily due to the evaluation's need for rigorous unbiased information to determine the effectiveness of the recruitment intervention (treatment) on a specific set of

outcomes. This requirement created challenges related to both the design and implementation of the demonstration. While *designing* the demonstration, we faced two notable challenges:

Tracking Individual Outcomes. To accommodate the evaluation, we designed an intervention limited to outreach modes that enabled us to track individual level outcomes (email and website). A workforce development, training, or educational program looking to conduct a similar type of multi-pronged outreach initiative would be able to include additional types of outreach modes (such as posters, flyers, radio/television ads, and social media ads). However, because it would not have been possible to tie individual responses to these modes, we could not use them. Many of the behavioral aspects of the intervention that we used in the recruitment content (themes, deadlines, checklists, etc.) can be incorporated into these other modes. Adding such modes to the demonstration design developed here would likely increase the target population's exposure to the content—plausibly leading to more of the target population showing interest in the program.

Isolating the Demonstration Treatment. We needed to design an intervention for two distinct groups that—with the exception of the women-themed content applied to the treatment group—were similar in look, feel, and quality. This equivalency, throughout the demonstration, is critical to isolate any measured effects of the women-themed content in the treatment content. This design required that, except for the specific recruitment themes and content we test in the demonstration, the design of the recruitment content be otherwise equivalent. To strive for equivalency by, for example, making sure the quality of graphics and writing are similar across groups, replicating the "call to action" by participants and implementing the same behavioral techniques (other than the specific treatment elements) into both the treatment and control materials mattered.

When *implementing* the demonstration, we encountered two additional challenges:

Addressing Errors in Interest Form Data. Not surprisingly, we encountered some typos in the interest forms and worked to match the interest form data back to the sample data. In most cases, we corrected the obvious typo, such as a one-letter typo in the person's name or email address, although it did not exactly match the sample data. We worked with the appropriate partner to correct all errors, most of which were straightforward.

Conducting Data Matching with the New Mexico SWA. For Central New Mexico, as noted, there is an extra layer of complexity in matching the outcomes data with the sample members, because the evaluation team does not have direct access to identifying information. To address this challenge, we worked with the New Mexico SWA to develop a site-specific procedures manual laying out all demonstration procedures, including those for data matching—advanced planning that helped make the matching process run smoothly. We also created a string-matching algorithm that matched identifying information provided in the outcomes data with identifying information on the randomized sample not shared by the New Mexico SWA.

CHAPTER 5: DEMONSTRATION NEXT STEPS AND PROJECT TIMELINE

The evaluation team began implementing the demonstration's Cohort 2 in both Central New Mexico and South Seattle in early 2018 by reviewing all demonstration activities and processes with demonstration partners in each of the two sites to prepare for cohort 2 implementation. Then, the evaluation team customized the SSPM with each partner, with a focus on the demonstration activities checklists provided in each manual.

The team also accessed the state workforce data of registered participants to include Cohort 2 for the two sites, prepared the cohort 2 sample, and conducted random assignment (as described in Chapter 3). The initial recruitment emails were sent to the two cohorts for Central New Mexico and South Seattle In January and February 2018. Demonstration Production Reports and monthly progress reports were prepared and submitted to DOL. We will continue to collect data on outcomes 1-3, and support the demonstration partners in: (1) providing more information on the training programs to women who express interest, and (2) transferring data on outcomes 4 and 5 (gather more information and apply for a program, respectively) from the sites to the evaluation team.

The evaluation team will begin the final analyses in April 2018 and submit the Draft Final Evaluation Report to DOL in May 2018. After revisions based on DOL feedback, the Final Evaluation Report will be submitted in June 2018, when a Final Briefing will be prepared and delivered to DOL, just prior to the end of the performance period.

See Exhibit 5.1 for the timeline of the project's remaining tasks.

Exhibit 5.1: Remaining Project Task Timeline

Activities	2017	2018					
	Dec	Jan	Feb	Mar	Apr	May	Jun
Provide Implementation Training and Evaluation TA							
Provide refresher implementation training and ongoing TA	▲	▲	▲	▲	▲		
Collect Evaluation Data							
Workforce agencies share jobseeker data		▲					
Conduct random assignment		▲					
Conduct outreach for cohorts		▲	▲	▲			
Prepare Demonstration Production Reports		▲	▲	▲	▲		
IMPAQ collects outcomes data		▲	▲	▲	▲		
Training providers assist participants interested in the program		▲	▲	▲			
Demonstration partners transfer later outcomes data to IMPAQ			▲	▲	▲		
Conduct Analysis of Qualitative and Quantitative Data							
Conduct impact analyses					▲		
Submit draft version of Final Report to DOL						▲	
Submit final version of Final Report to DOL							▲
Conduct final briefing for DOL							▲

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WIOA YouthBuild equal opportunity requirements (P.L. 113-128, 128 Stat. 1580, codified as amended at 29 USC §3226(c)(3)(B)(viii))

APPENDICES

Appendix A: Outreach Materials

Appendix B: NTO Barriers and Strategies

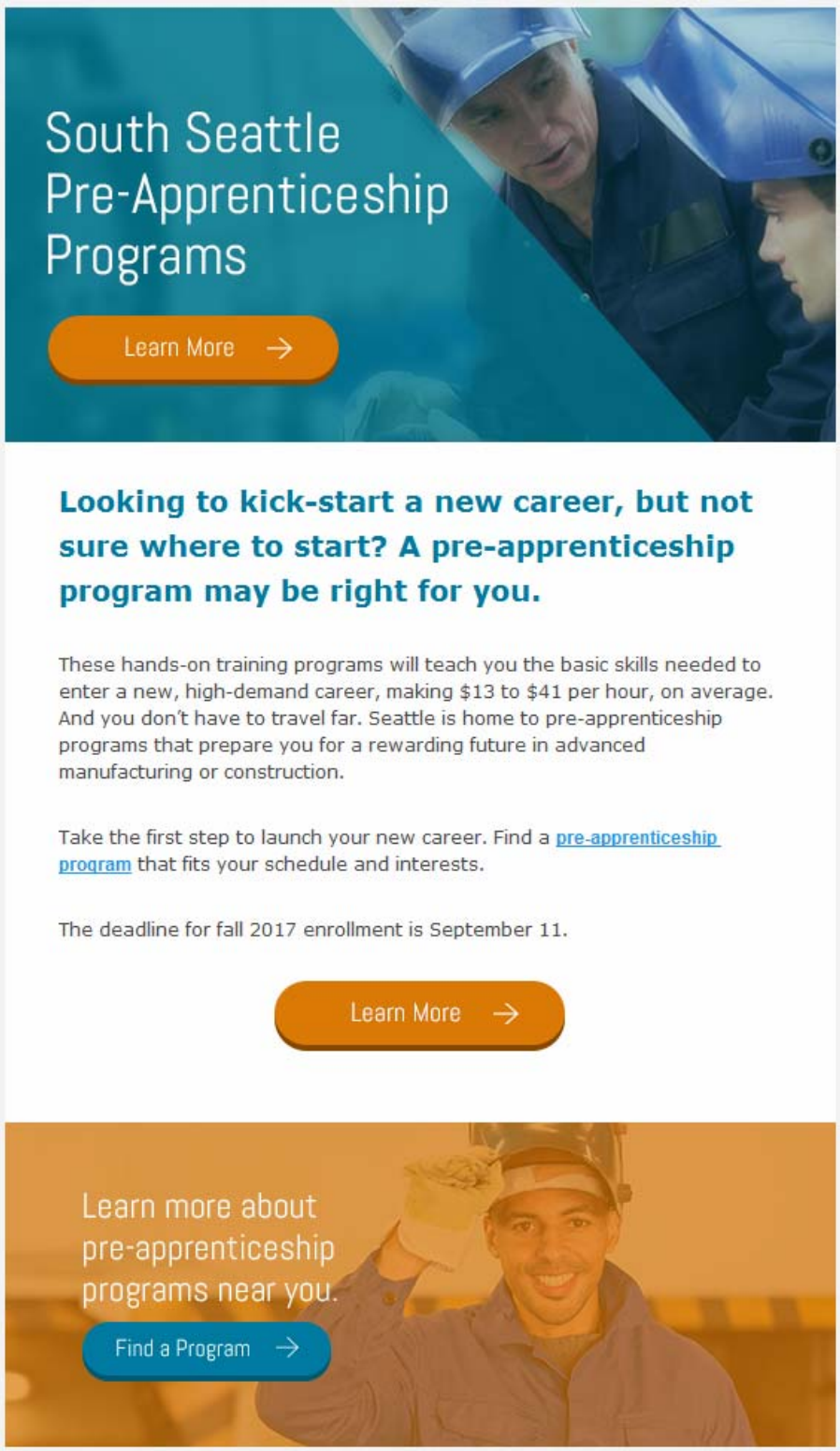
Appendix C: Demonstration Site Timelines

Appendix D: Site Specific Procedures Manuals (SSPMs)

Appendix A: Outreach Materials

South Seattle

Generic Control - Email 1



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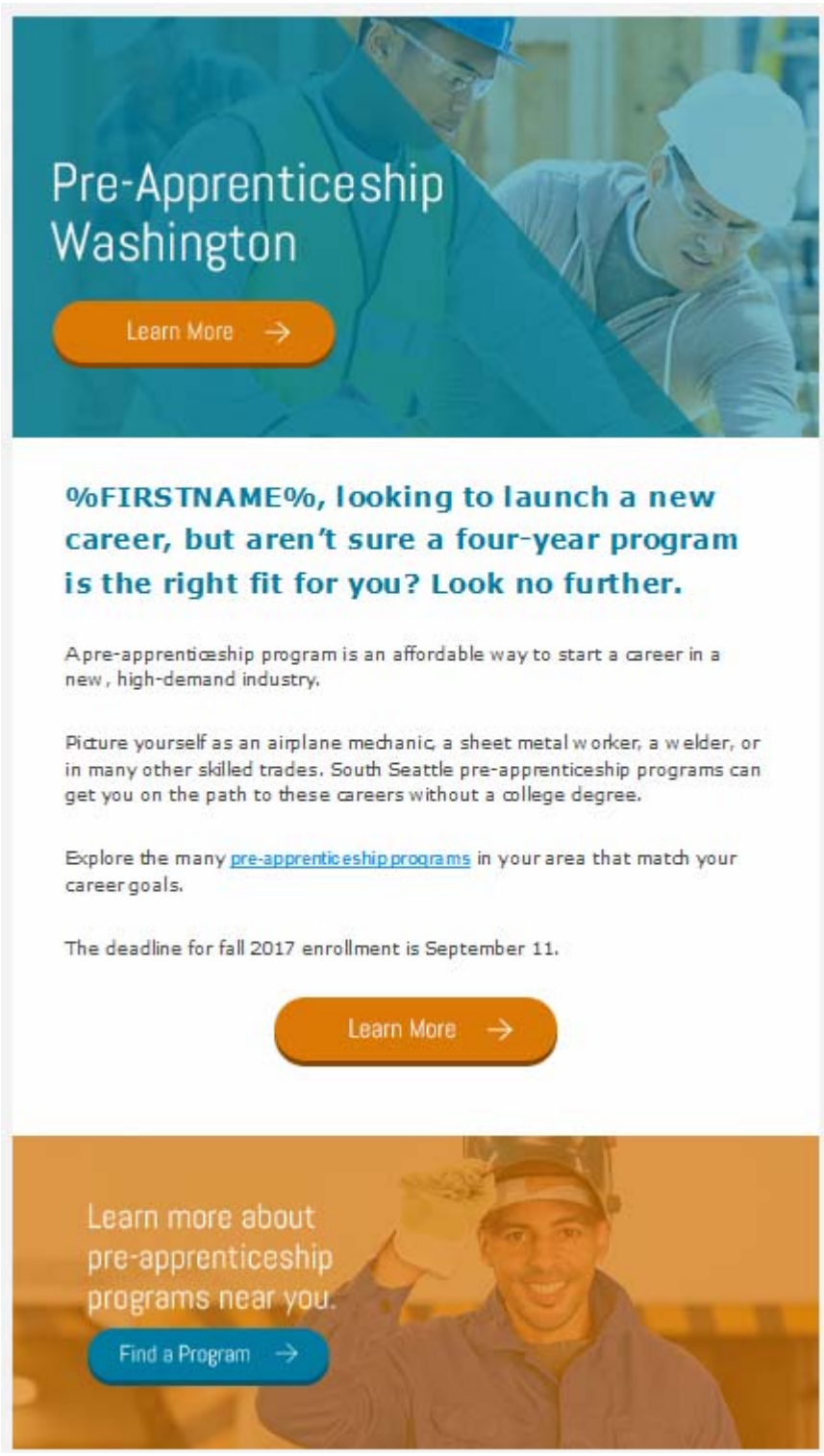

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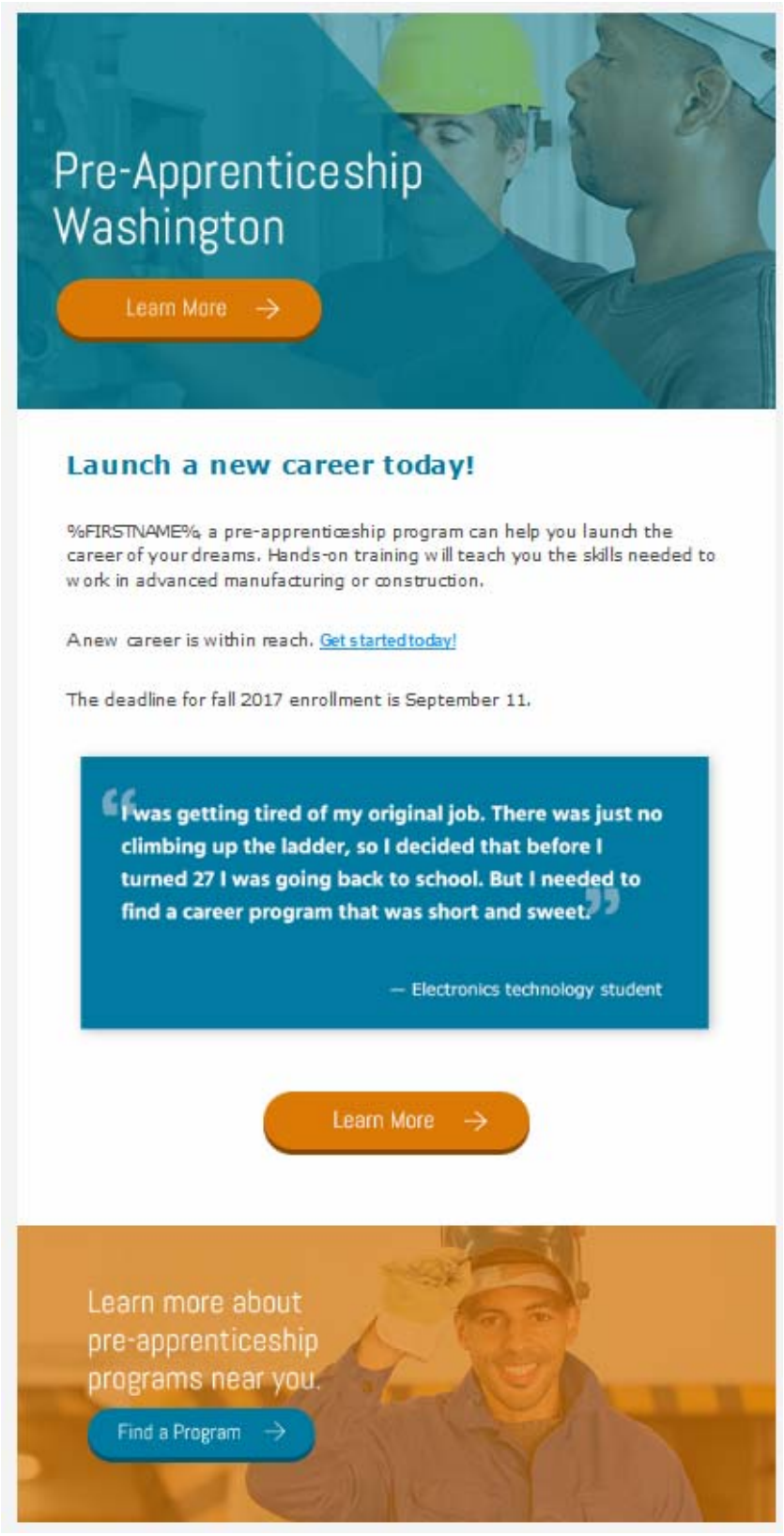

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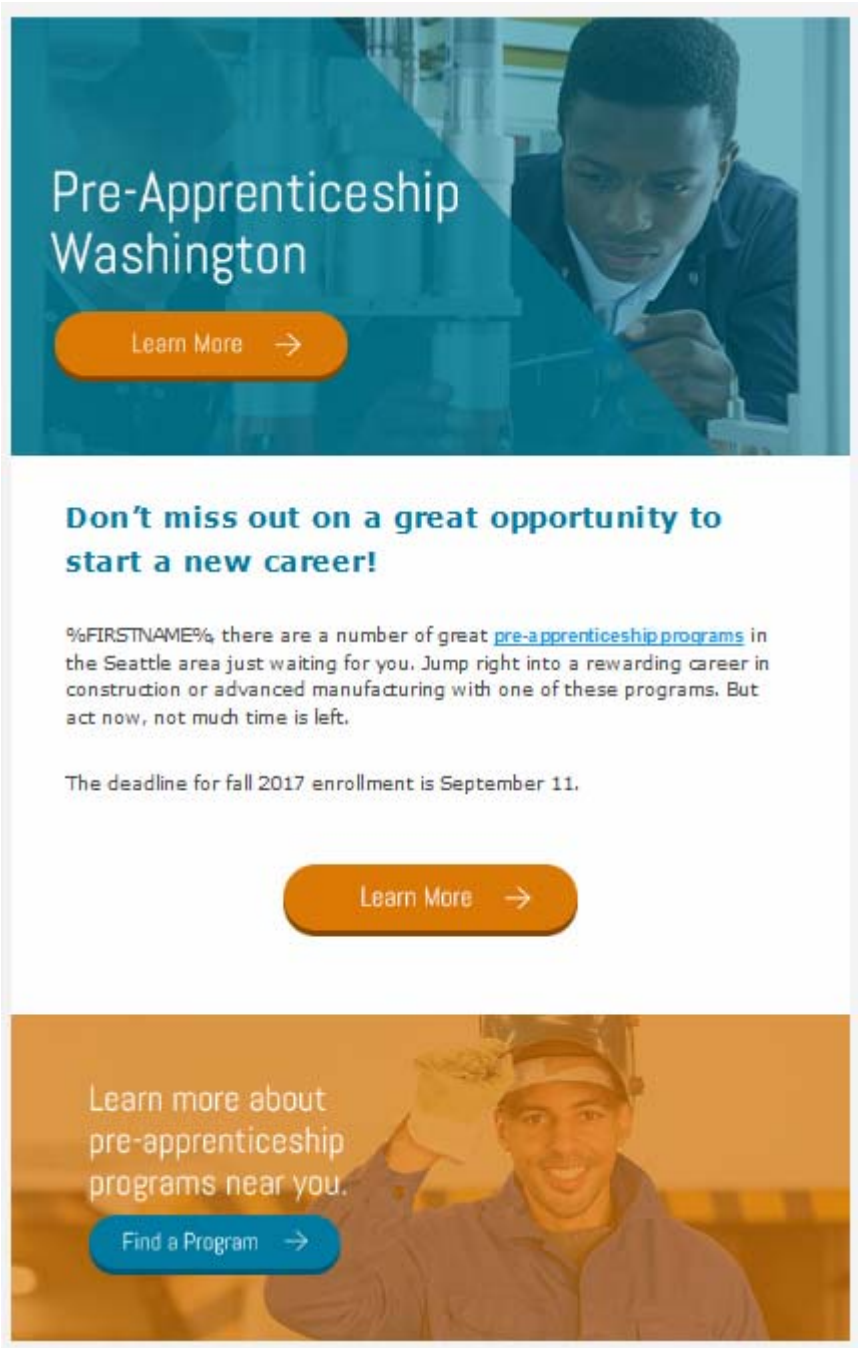
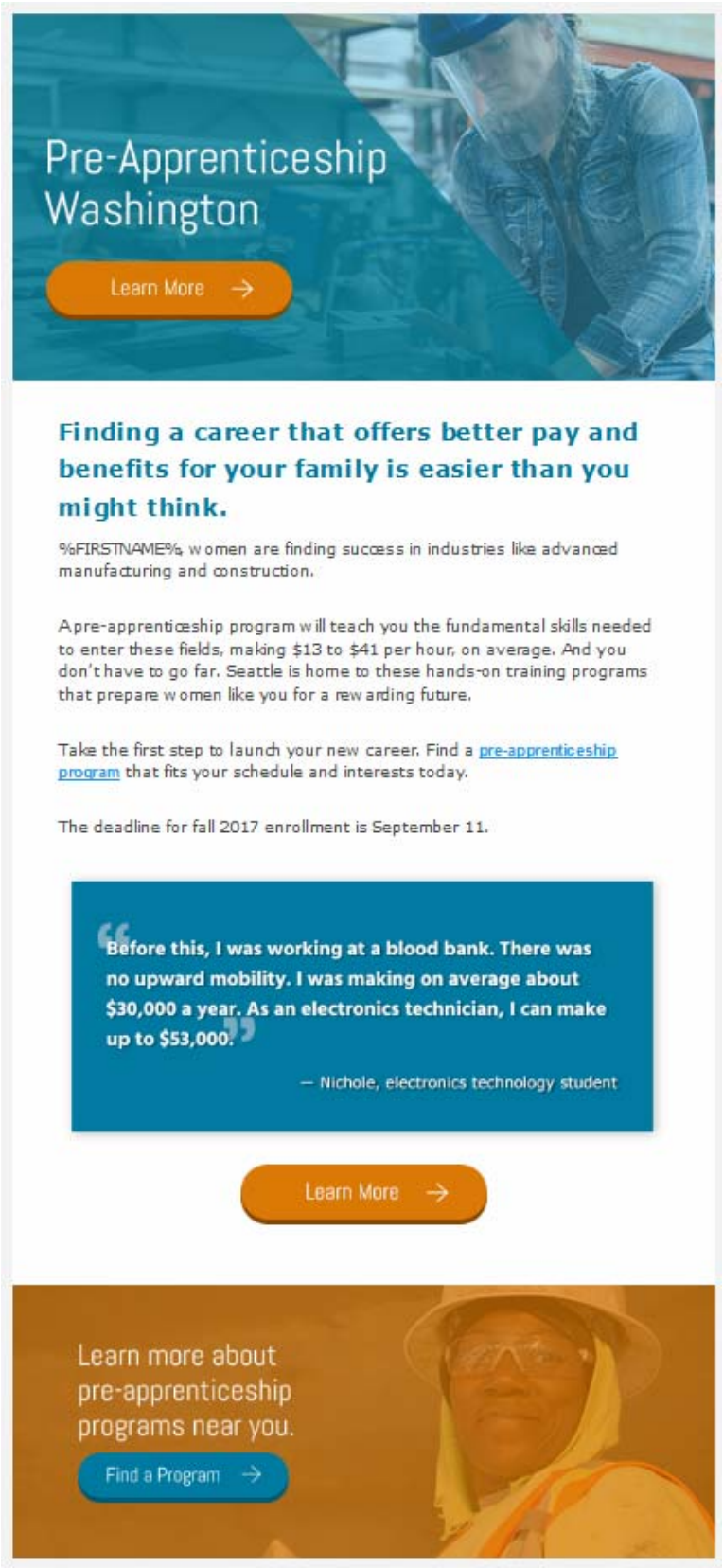


Generic Control - Email 5

Generic Control - Postcard

Women-Themed Treatment - Email 1



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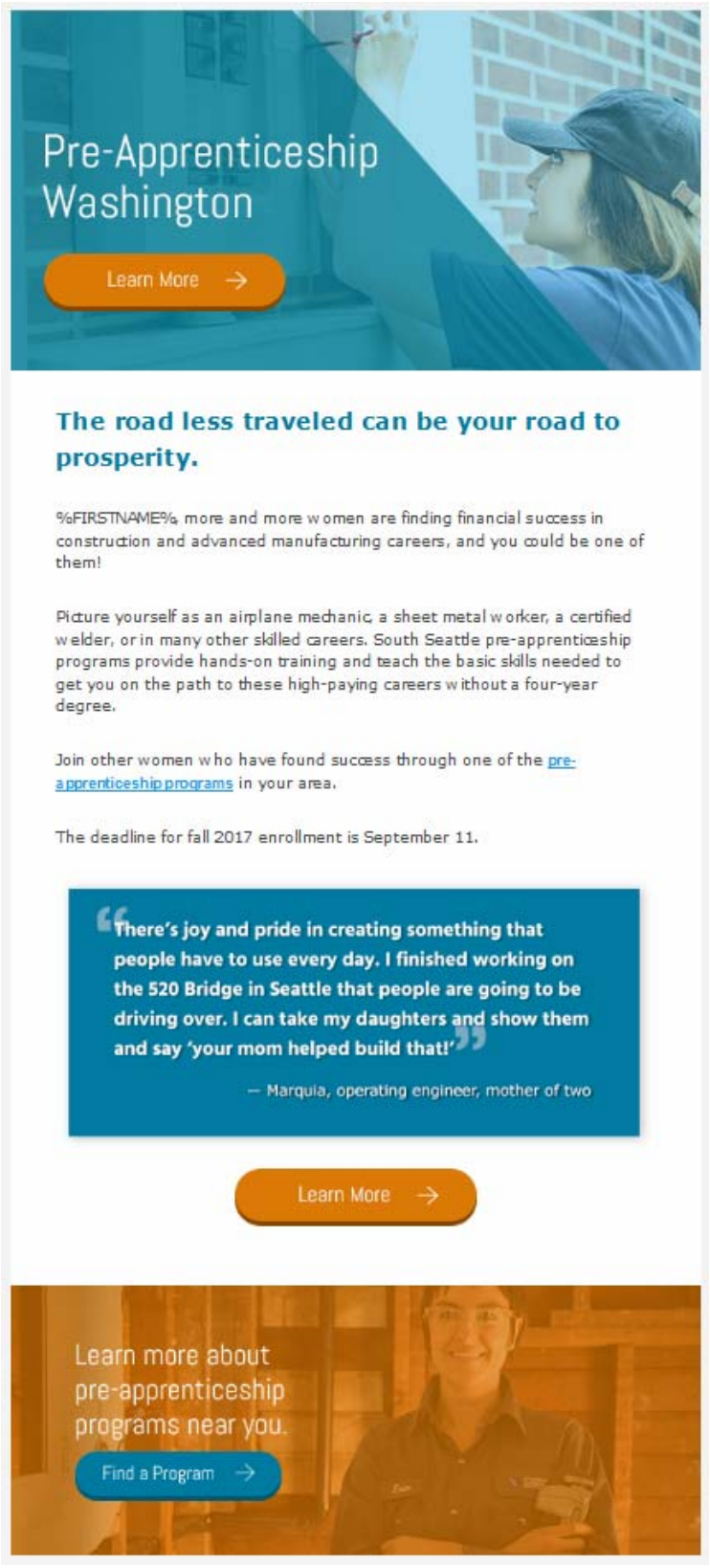

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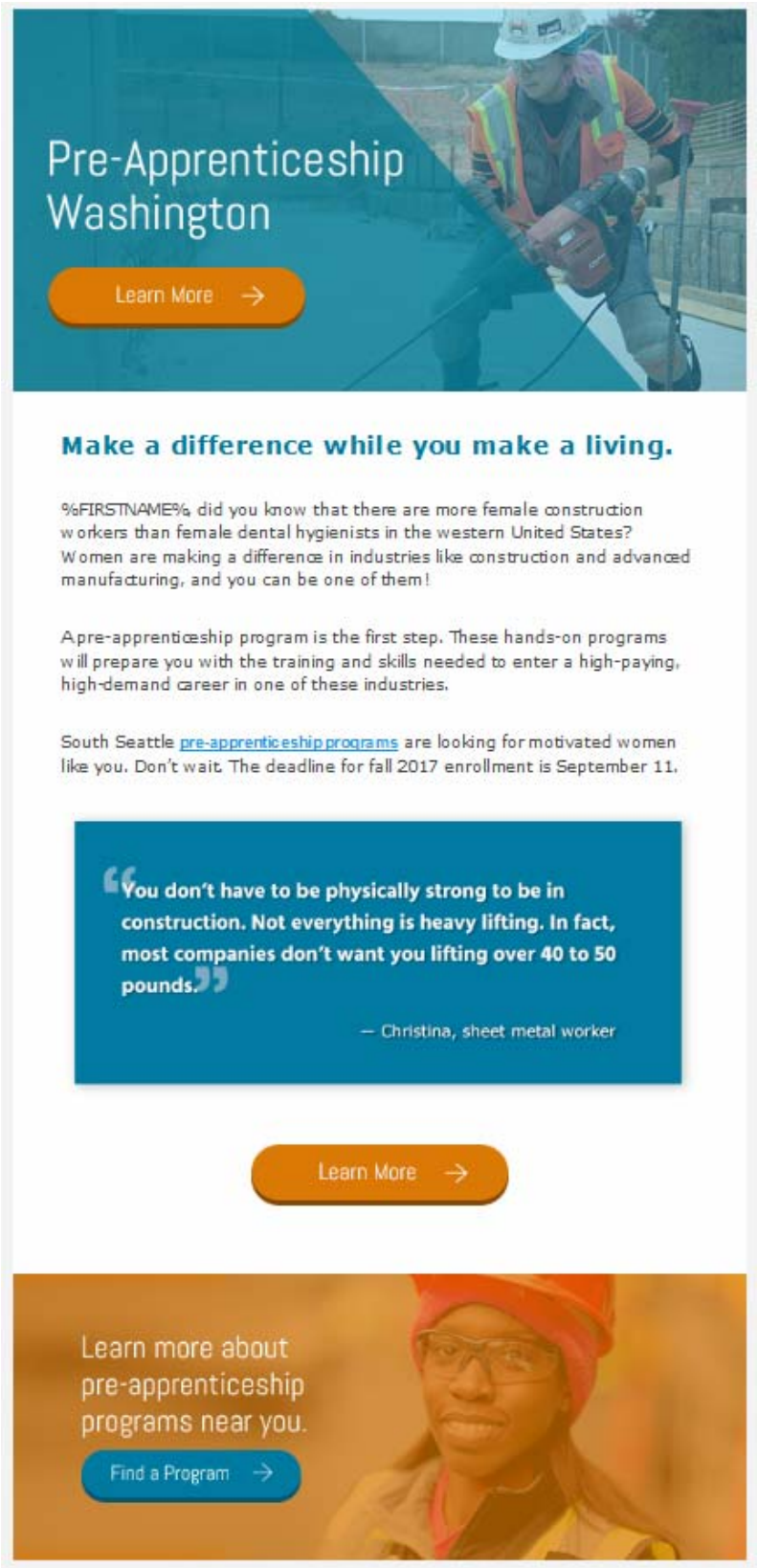

Women-Themed Treatment - Email 4

Women-Themed Treatment - Email 5

Women-Themed Treatment - Postcard

Central New Mexico

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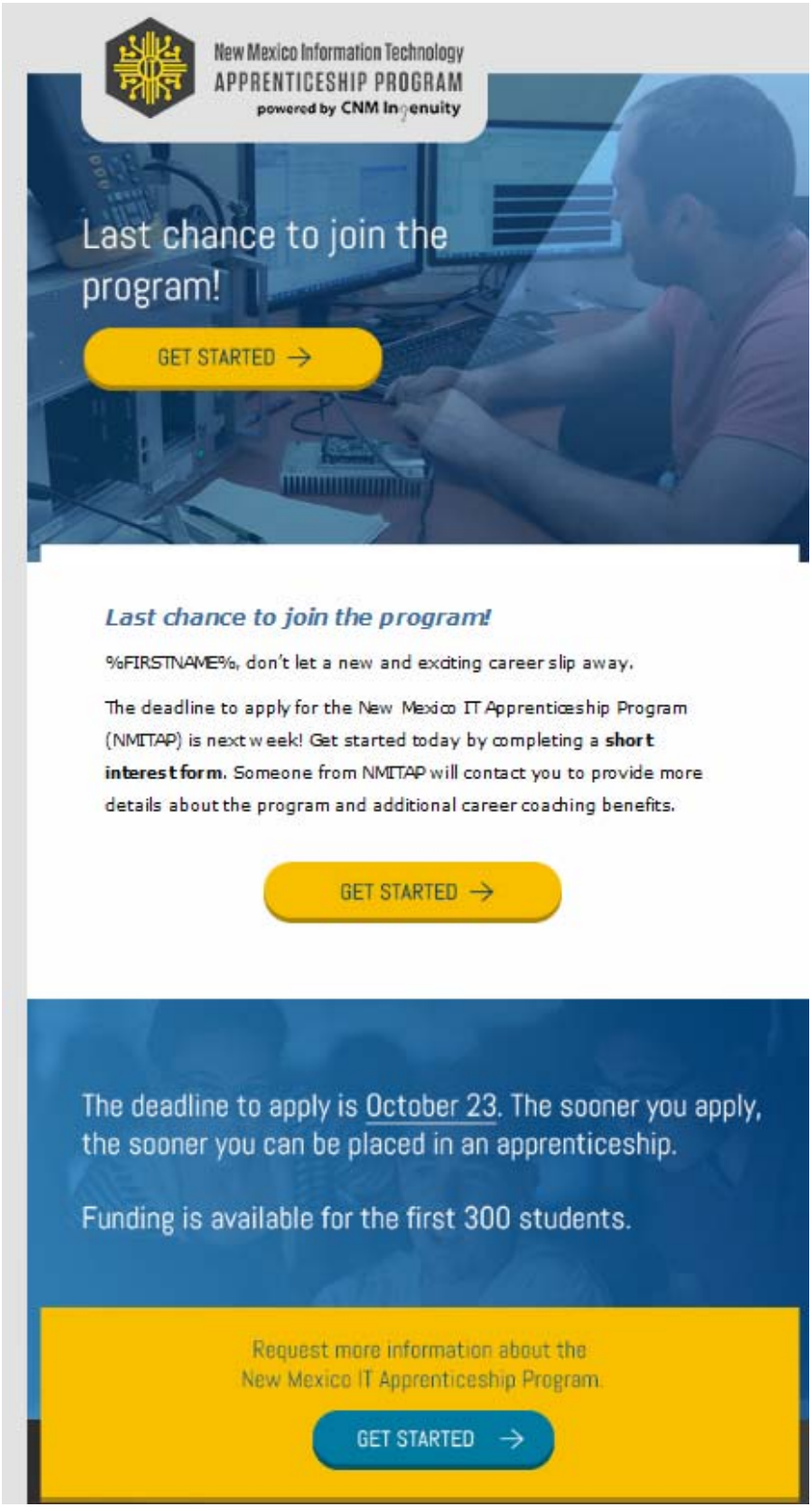

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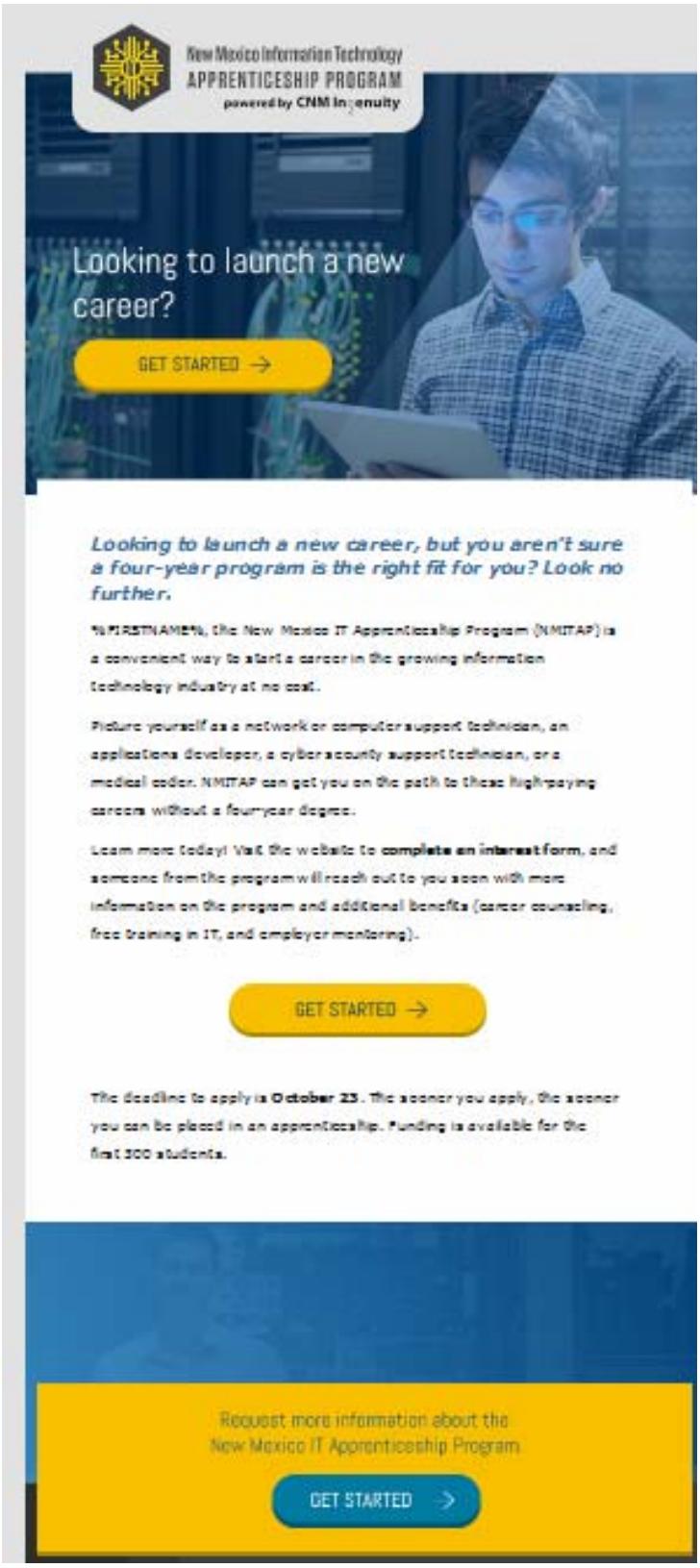

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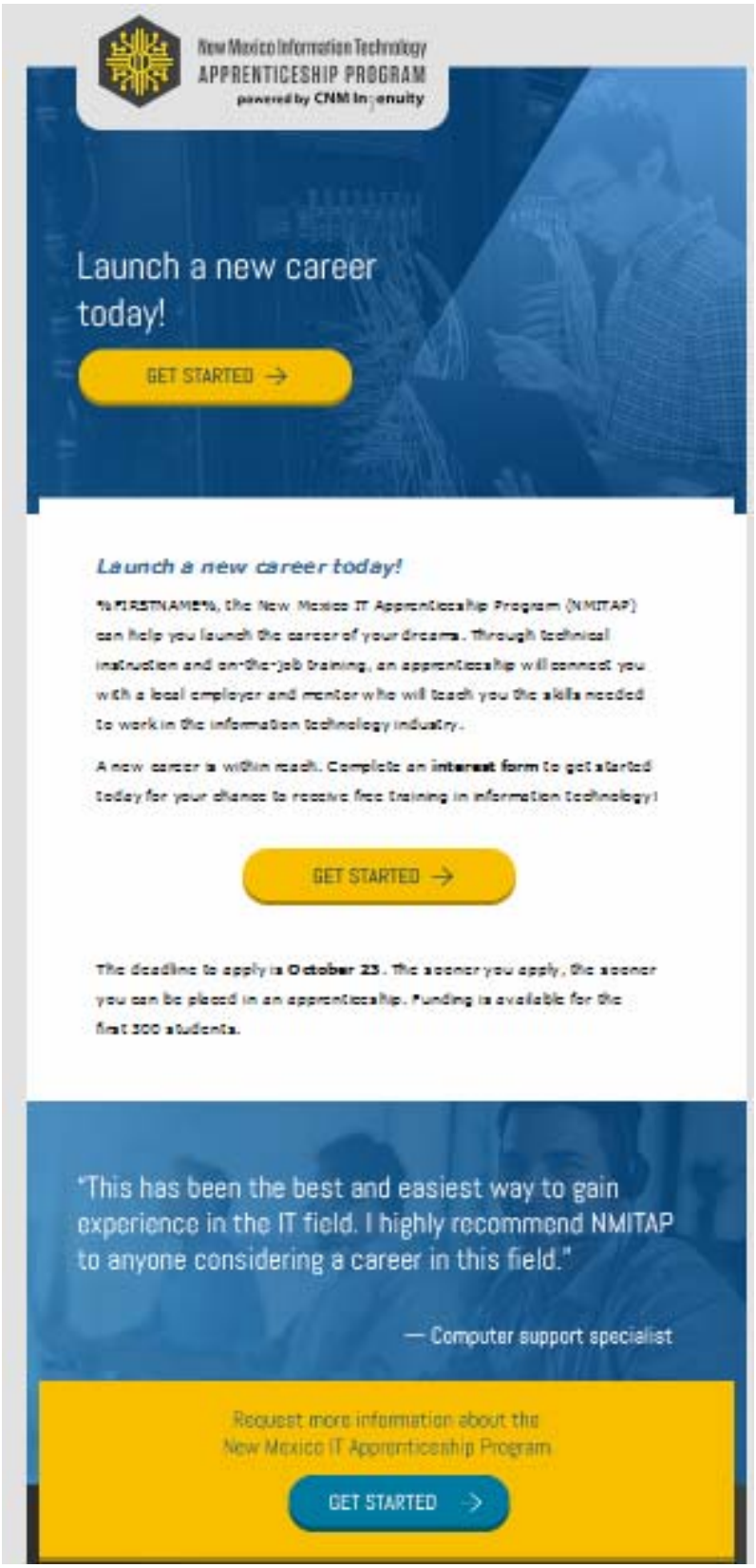

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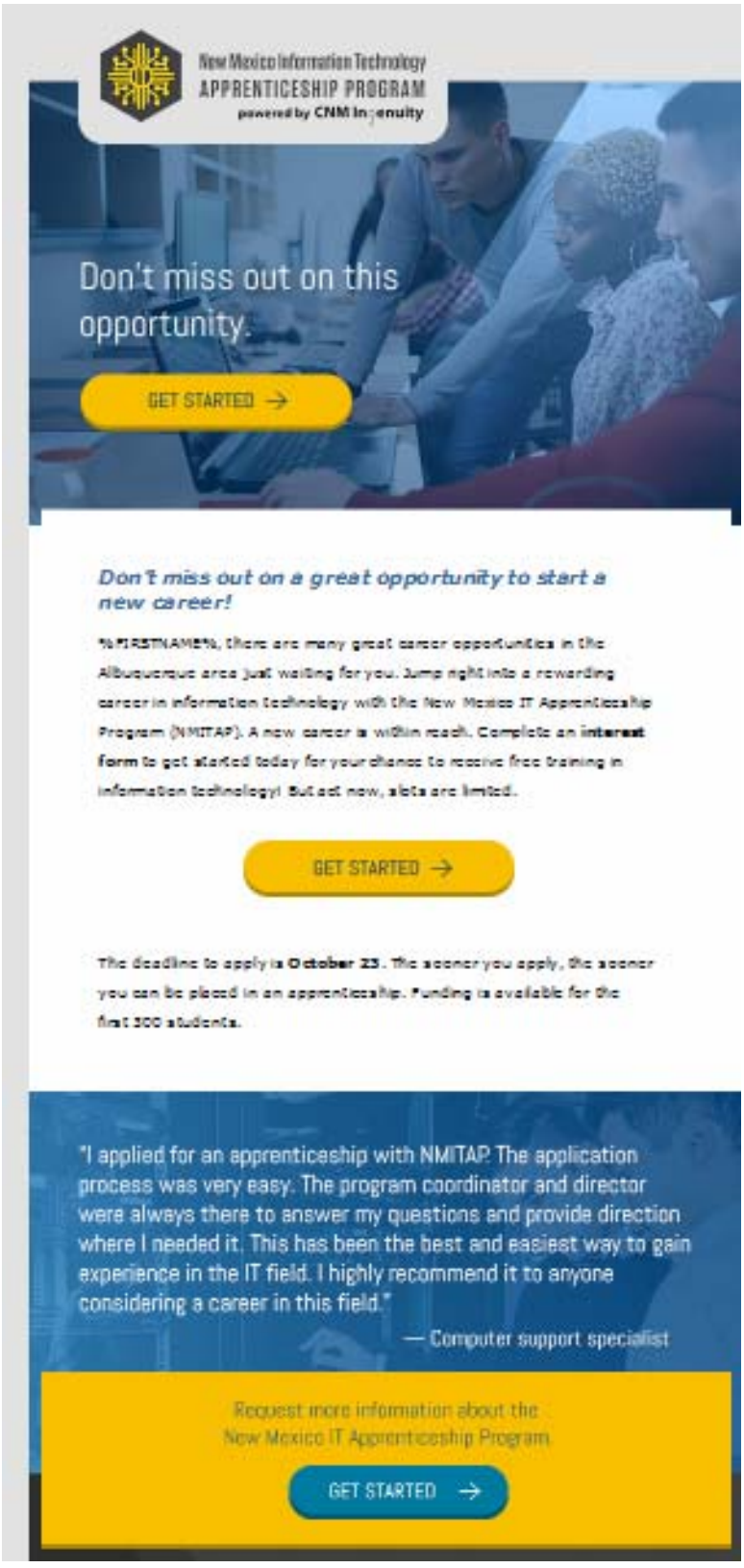

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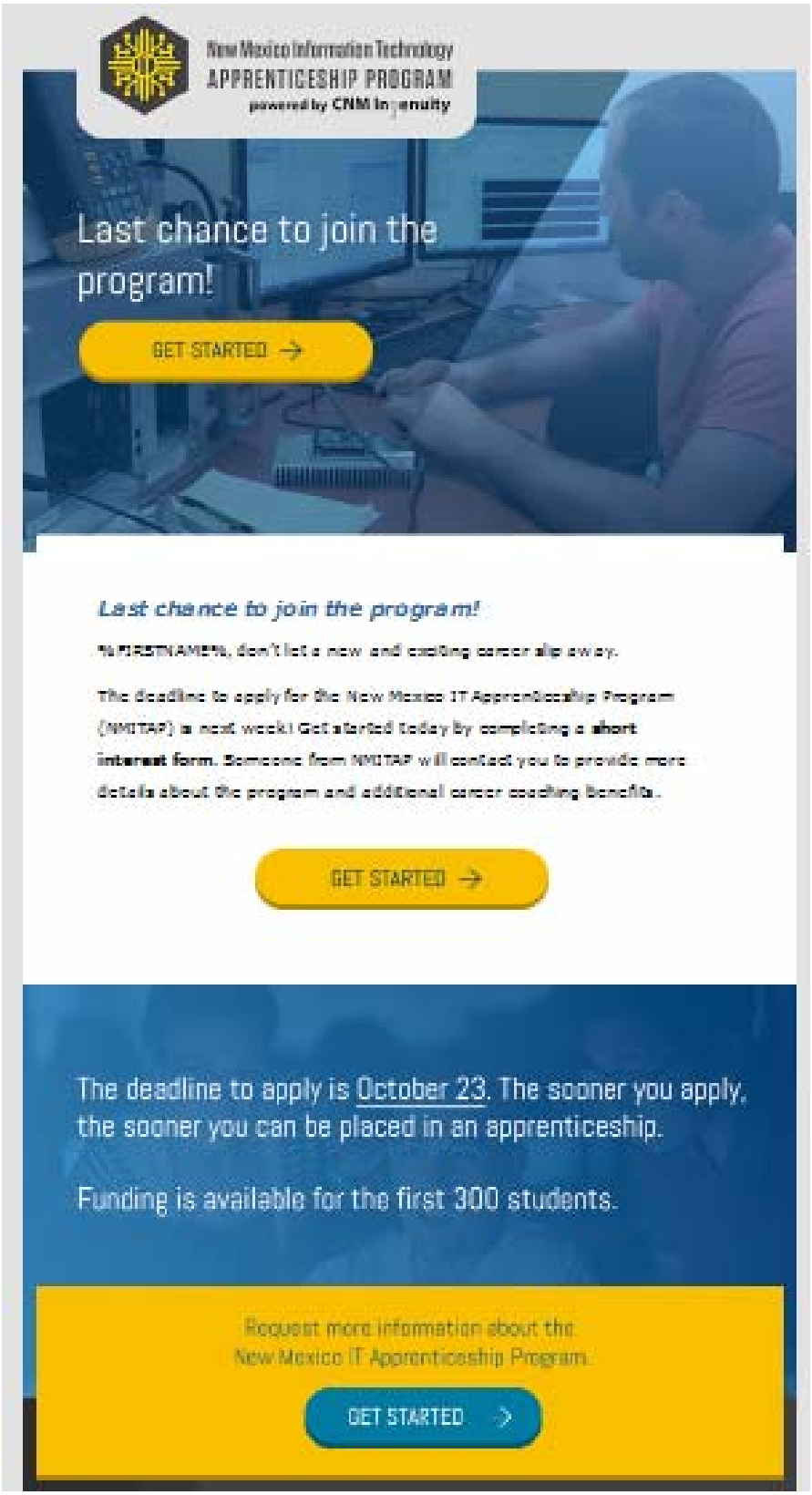

Generic Control - Postcard

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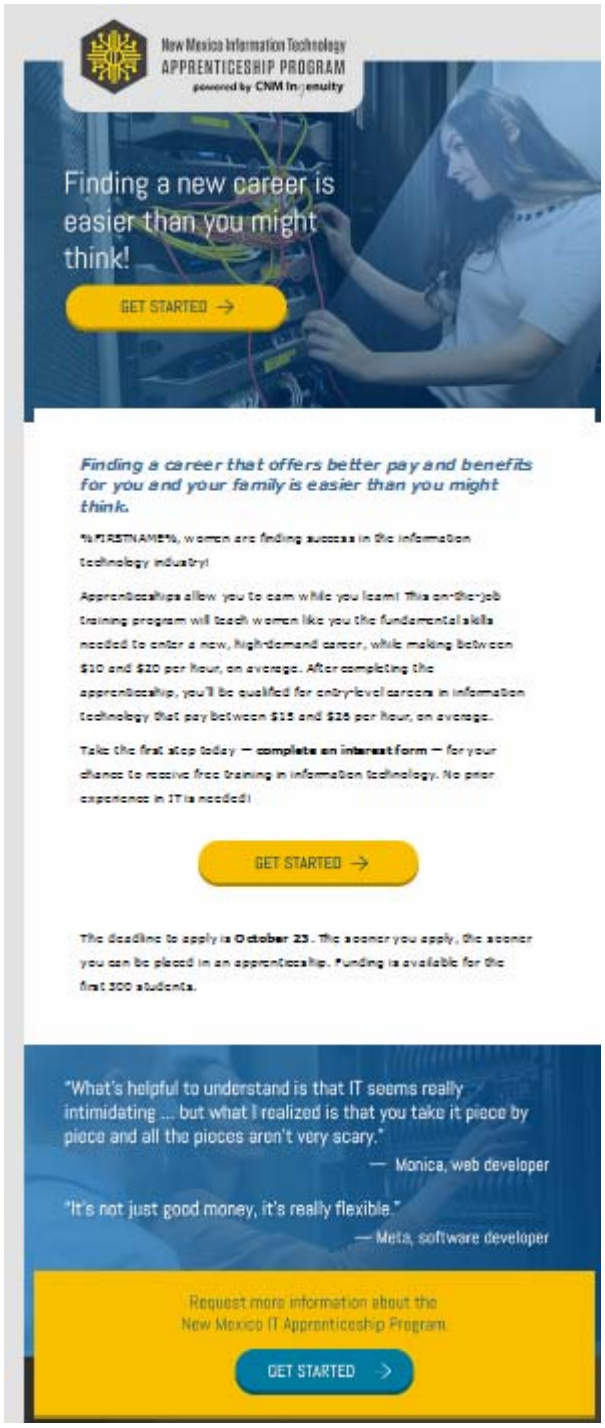

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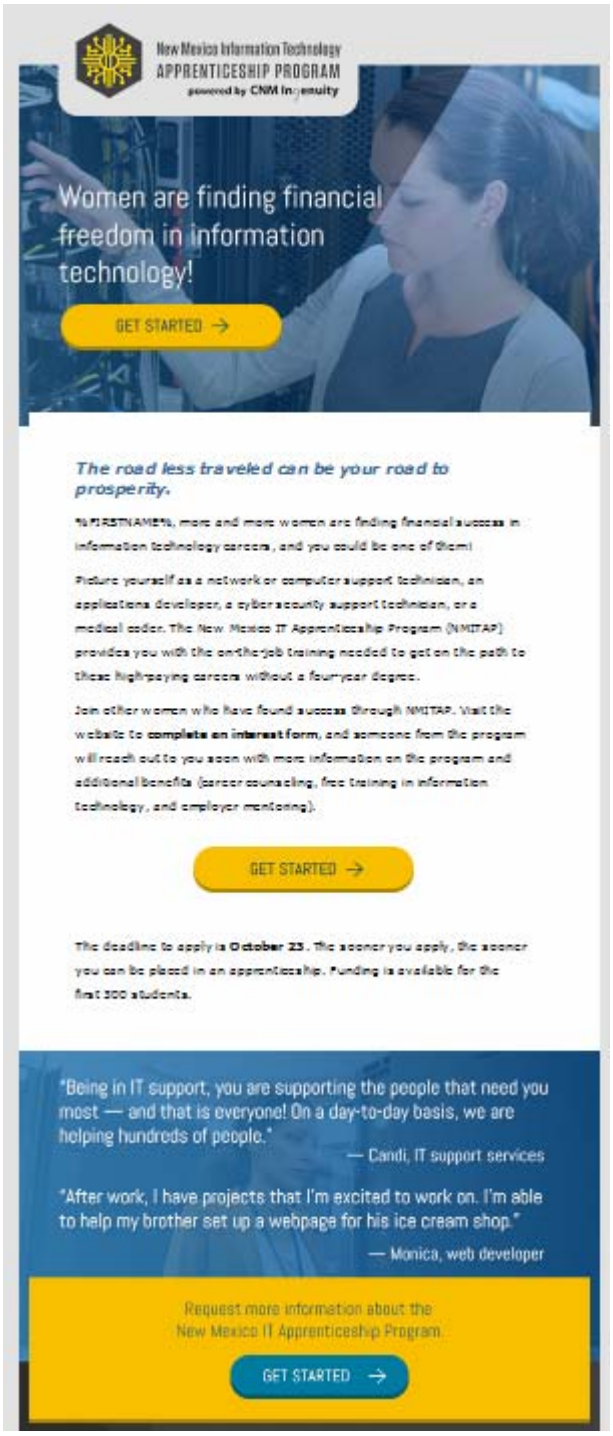

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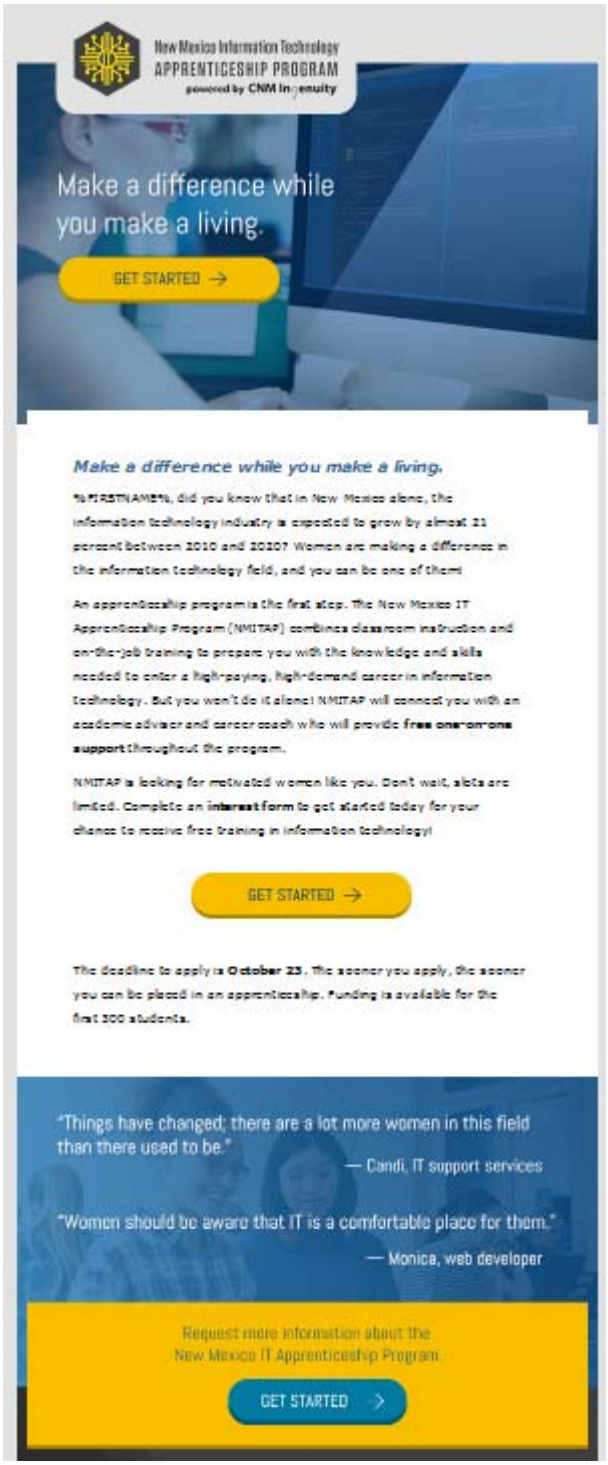

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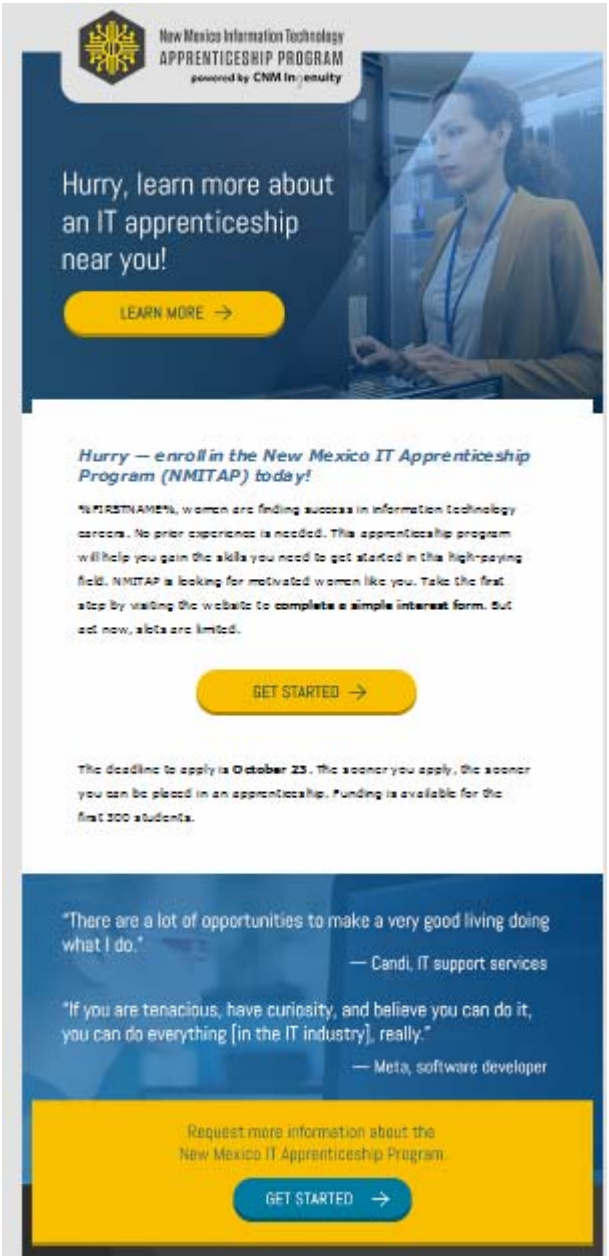

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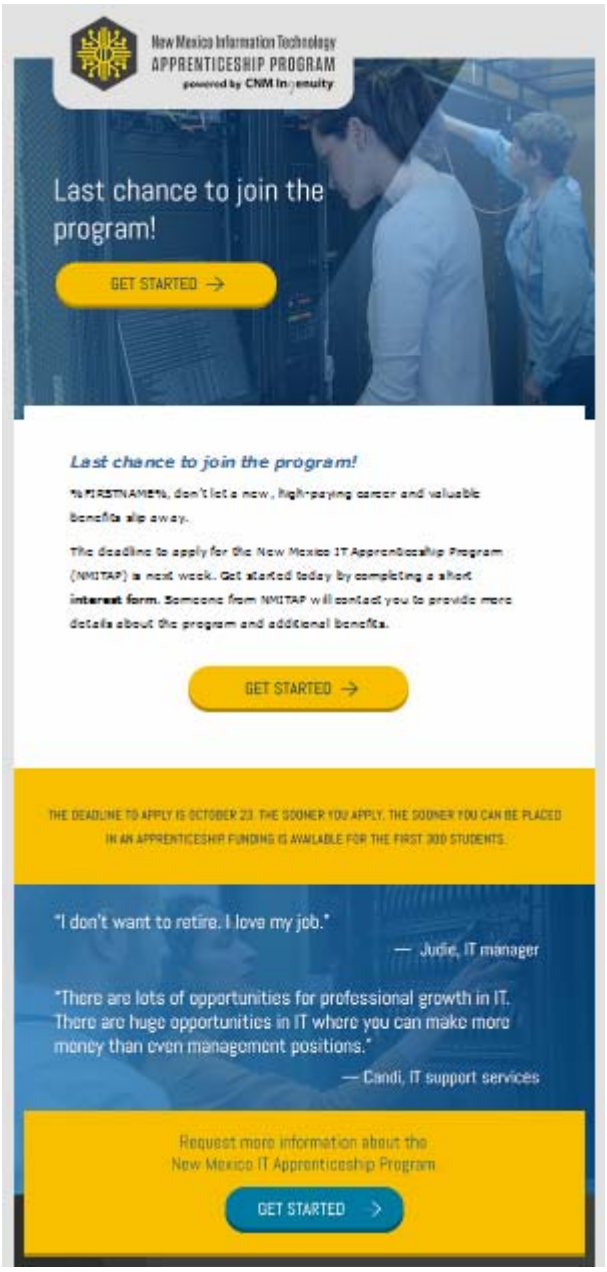

Women-Themed Treatment - Postcard

APPENDIX B: NON-TRADITIONAL OCCUPATIONS BARRIERS AND STRATEGIES

This appendix presents additional detail on the barriers to NTO entry and retention identified through the literature review, as well as the strategies identified for addressing such barriers.

Barriers to NTO Entry

Barriers to entry into NTOs prevent women from accessing employment in certain occupations and from realizing the benefits of that employment, including economic self-sufficiency, higher wages, improved benefits, broader job opportunities and advancement potential, and job satisfaction.

The review of literature identified a spectrum of barriers that prevent women from pursuing and entering NTOs, as well as being retained in these occupations. These barriers fall into two main categories: workplace and career-related barriers, and education barriers. Workplace and career-related barriers relate to the characteristics and perceptions of certain occupations that make women less inclined to enter and remain in these NTOs. Education barriers relate to the issues women face in K-12 and postsecondary education programs that are the basis for entry into NTOs, particularly those in the STEM fields: science, technology, engineering, and mathematics. The evaluation team identified the following types of barriers in these two categories (examples of studies for each barrier are cited in the notes):

- Workplace and career-related barriers:
  - Lack of awareness and inaccurate perceptions of NTOs[30]
  - Biased career recruitment materials and practices[31]
  - Lack of occupational training/inadequate skill set[32]
  - Negative training/occupational characteristics[33]
  - Biased career mechanisms and practices in the workplace[34]
- Education-related barriers:
  - Access to and participation in STEM education[35]
  - Biased curriculum structure and instructional attitudes[36]
  - Stereotype threat[37]
  - Lack of self-efficacy.[38]

[30] An example from the aviation mechanic industry: Clark, P. J., Newcomer, J. M., & Jones, A. M. (2015). Overcoming gender barriers in aircraft maintenance: Women's perceptions in the United States. *Collegiate Aviation Review*, *33*(2), 66.

[31] Kmec, J. A. (2003). Minority job concentration and wages. *Social Problems*, *50*(1), 38-59.

[32] Taylor, C. J. (2010). Occupational sex composition and the gendered availability of workplace support. *Gender & Society*, *24*(2), 189-212.

[33] Clark, et al. (2015).

[34] Kmec (2003).

[35] Griffith, A. L. (2010). Persistence of women and minorities in STEM field majors: Is it the school that matters? *Economics of Education Review*, *29*(6), 911-922.

[36] Gunter, R. (2009). The emergence of gendered participation styles in science-related discussions: Implications for women's place in science. *Journal of Women and Minorities in Science and Engineering*, *15*(1), 53-75.

[37] Fogliati, V. J., & Bussey, K. (2013). Stereotype threat reduces motivation to improve. *Psychology of Women Quarterly*, *37*(3), 310-324.

[38] Quimby, J. L., & O'Brien, K. M. (2004). Predictors of student and career decision-making self-efficacy among nontraditional college women. *Career Development Quarterly*, *52*(4), 323-339.

Strategies

The literature review also identified promising strategies for addressing barriers to NTO entry. These strategies fall into the same two categories as the barriers: workplace and career-related strategies, and education strategies. While both are critical, the strategies most relevant to DOL objectives are drawn primarily from the literature on workplace and career-related strategies.

Workplace and career-related strategies are typically implemented by career guidance professionals, training providers, and employers. Outcomes typically include increased NTO employment among women and minorities, and increased access to and retention and advancement in NTOs. These strategies generally address barriers associated with: (1) bias found in career materials, mechanisms, and policy; (2) individual perceptions and responses to the characteristics of NTOs; and (3) lack of support services. Exhibit 1 presents the types of workplace and career-related strategies identified in the literature review.

Exhibit 1: Workplace and Career-Related Strategies

Strategy Category	Description
Targeted Apprenticeships/ Pre-apprenticeships[1]	Paid on-the-job learning generally resulting in a nationally recognized credential that offers job seekers immediate employment opportunities in high-wage, high-skilled occupations. Pre-apprenticeship programs provide exposure to a wide variety of high-skill, high-wage careers.
Institutional Changes in NTOs[2]	Changes that reshape organizational structure and policy to create a culturally responsive environment for one or more NTO populations.
Targeted Recruitment Practices and Materials[3]	Targeted recruitment materials and practices tailored specifically to the workplace issues and needs of women and minorities.
Family-Friendly Policies and Supportive Practices[4]	Policies such as subsidized child care and maternity leave that encourage parents to stay in the workforce.
Professional Development for Career Counselors[5]	Interventions sensitizing counselors to the specific challenges and job trends facing women and minorities professionally.
Professional Mentoring Programs[6]	New hires from NTO populations are given an equity-trained mentor, often of the same gender/race as the mentee, to guide their career development and provide support in various ways.

[1] Simon, L., & Clarke, K. (2016). Apprenticeships should work for women too! *Education + Training*, *58*(6), 578-596.
[2] Dainty, A. R. J., Bagilhole, B. M., Ansari, K. H., & Jackson, J. (2004). Creating equality in the construction industry: An agenda for change for women and minorities. *Journal of Construction Research*. *5*(1), 75-86.
[3] Puerto, C., Guggemos, A. A., & Shane, J. (2011). Exploration of strategies for attracting and retaining female construction management students. Proceedings of the 47th International Conference of the Associated Schools of Construction, Omaha, NE, 187-194.
[4] Reed, D., Liu, A. Y.-H., Kleinman, R., Mastri, A., Reed, D., Sattar, S., & Ziegler, J. (2012). An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States. ETAOP 2012-10. Washington, DC: U.S. Department of Labor, Employment and Training Administration.
[5] Coogan, P. A. & Chen, C. P. (2007). Career development and counselling for women: Connecting theories to practice. *Counseling Psychology Quarterly*, *20*(2), 191-204.
[6] Byrd, B.. (1999). Women in carpentry apprenticeship: A case study. *Labor Studies Journal, 24*(3), 3-22.

In contrast, *education strategies* are typically implemented by education professionals. While highly correlated with addressing barriers associated directly with NTO entry and retention, outcomes for these strategies typically include increased enrollment, retention, and graduation rates in STEM fields, rather than directly employment-related outcomes. Strategies typically address barriers related to the delivery of academic material as well as those related to student proficiency, academic interest, and self-efficacy to pursue STEM-related academic programs. Exhibit 2 presents the types of education-related strategies identified through the literature review.

Exhibit 2: Education Strategies

Strategy Category	Description
Supplemental Education Programs[1]	Extracurricular activities that encourage women and minorities to take an interest in STEM fields through community-based and interactive exercises
Curriculum Development[2]	Expanding the cultural lens of educational curricula to create a warmer classroom environment for women and/or minorities in STEM programs
Student Mentoring Programs[3]	Assignment of women and minority students in STEM to a mentor for academic counseling and support
Professional Development for Educators[4]	Programs seeking to alter the way teachers teach STEM subjects, to be more sensitive to the needs and perceptions of women and minorities
Self-Affirmation Techniques[5]	Programs that build on students' existing skills and abilities to build confidence early in the career decision-making process

[1] Frost J. H, & Wiest, L. R. (2007). Listening to the girls: Participant perceptions of the confidence-boosting aspects of a girls' summer mathematics and technology camp. *Mathematics Educator*, 17(2), 31-40.
[2] Knight, M. T., & Cunningham, C. M. (2004). Building a structure of support: An inside look at the structure of women in engineering programs. *Journal of Women and Minorities in Science and Engineering*, *10*(1), 1-20.
[3] Boldyreff, C. & Massey, E. M. (2009). Evolution of a cross-year mentoring scheme. *International Journal of Gender, Science and Technology*, *1*(1), 138-144.
[4] Hodges, J., Pearson, A., & Reese, D. (2011). WomenLEAD: Leadership development for female faculty in business and engineering. *International Journal of Gender, Science and Technology, 3*(2), 331-337.
[5] Cech, E., Rubineau, B., Silbey, S., & Seron, C. (2011). Professional role confidence and gendered persistence in engineering. *American Sociological Review*, *76*(5), 641-666.

APPENDIX C: DEMONSTRATION SITE TIMELINES

Exhibit 1: Activities and General Timeline of Activities for South Seattle

Activity	Timeline	Action Required from Training Partner[50]	Fall 2017 Cohort	Spring 2018 Cohort
Confirm enrollment dates for cohort	**8 weeks before school enroll deadline**	**Yes – Provide or Confirm dates**	**7/17/2017**	**1/21/2018**
Request jobseeker data from ESD (due one week later)	8 weeks before school enroll deadline	None	7/17/2017	1/21/2018
Send Initial Recruitment Email	6 weeks before school enroll deadline	None	7/31/2017	2/5/2018
Send 1st Reminder Email	5 weeks before school enroll deadline	None	8/7/2017	2/12/2018
Send 2nd Reminder Email	4 weeks before school enroll deadline	None	8/14/2017	2/19/2018
Mail Recruitment Postcard	3 weeks before school enroll deadline	None	8/21/2017	2/26/2018
Send 3rd Reminder Email	3 weeks before school enroll deadline	None	8/21/2017	2/26/2018
Send 4th Reminder Email	2 weeks before school enroll deadline	None	8/28/2017	3/5/2018
Send post-interest form reminder email to those who have completed interest form	To be sent between 1 week after start of emailing and up to the enroll deadline (emails are sent automatically 1-2 days after completing form)	None	7/31-9/11	2/4-3/18
Share interest forms with case manager or training provider	**Weekly between start of emailing and class start date**	**Yes – Follow-up with interested jobseekers on a weekly basis**	**Weekly 7/31 to 9/25**	**Weekly 2/4 to 4/1**
Send final reminder email, different versions to those that completed and did not complete the interest form	1 week before school enroll deadline	None	9/5/2017	3/12/17
Activity	**Timeline**	**Action Required from Training Partner**	**Fall 2017 Cohort**	
Training provider submits outcomes data	**Monthly**	**Yes – Send IMPAQ outcomes data**	**See Exhibit B.2 below**	
Deadline to Enroll in School	2 weeks before Class Start Date	None	9/11/2017	3/18/2018
Class Start Date	Based on training partner schedule	None	9/25/2017	4/2/2018
Classes End Date	Based on training partner schedule	None	12/15/2017	6/19/2018

Note: IMPAQ will share interest form data with the case manager on a continual basis outside of the current cohort recruitment window.
The case manager should provide any interested individuals that complete the interest form with information on the program and the next available program dates.
The training partners were: Apprenticeship & Nontraditional Employment for Women (ANEW), Aerospace Joint Apprenticeship Committee (AJAC), and Clover Park Technical College (CPT).

Exhibit 2: South Seattle Data Transmission Schedule

Data Transmission	Data Transmission to IMPAQ Date	Date Range
1st transmission	9/05/2017	7/01/2017 - 8/31/2017
2nd transmission	10/05/2017	9/01/2017 - 9/30/2017
3rd transmission	11/06/2017	10/01/2017 – 10/31/2017
4th transmission	12/05/2017	11/01/2017 – 11/30/2018
5th transmission	1/05/2018	12/01/2017 – 12/31/2017
6th transmission	2/05/2018	1/4/2018 – 1/31/2018
7th transmission	3/05/2018	2/01/18 – 2/28/2018
8th transmission	4/05/2018	3/01/18 – 3/31/2018
9th transmission	4/20/2018	4/01/18 – 4/15/2018

Exhibit 3: Activities and General Timeline of Activities for Central New Mexico

Activity	Timeline	Acting Party	Fall 2017 Cohort	Spring 2018 Cohort
Implementation Activities				
Pull cohort sample and sends de-identified data to IMPAQ	7 weeks before school enroll deadline	**DWS**	8/29/2017	1/2/2018
Conduct RA and sends it back	Two days after receiving data	**IMPAQ**	9/5/2017	1/4/2018
Merge RA variable back into restricted dataset	6 weeks before school enroll deadline	**DWS**	9/7/2017	1/9/2018
Send final materials to DWS to send out	6 weeks before school enroll deadline	**IMPAQ**	9/11/2017	1/9/2018
Send Initial Recruitment Email	5 weeks before school enroll deadline	**DWS**	9/18/2017	1/16/2018
Send 1st Reminder Email	4 weeks before school enroll deadline	**DWS**	9/25/2017	1/23/2018
Evaluation team begins to print the postcard for the entire sample and sends to DWS	5 weeks before school enroll deadline	**IMPAQ**	9/18/2017	1/16/2018
Begin holding information sessions	3 weeks before school enroll deadline (3 sessions per cohort)	**CNM**	10/05/2017 10/12/2017	2/1/2018 2/8/2018

Activity	Timeline	Acting Party	Fall 2017 Cohort	Spring 2018 Cohort
			10/19/2017	2/15/2018
Send 2nd Reminder Email	3 weeks before school enroll deadline	DWS	10/2/2017	1/30/2018
Receive postcards	3 weeks before school enroll deadline	DWS	10/2/2017	1/30/2018
Affix addresses/postage and mails to the entire sample.	2 weeks before school enroll deadline	DWS	10/10/2017	2/6/2018
Send 3rd Reminder Email	2 weeks before school enroll deadline	DWS	10/10/2017	2/6/2018
Send post-interest form reminder email to those who have completed interest form	To be sent between the start of emailing and up to the enroll deadline, (emails are sent automatically 1-2 days after completing form)	IMPAQ	9/18-10/23	1/16-2/20
Share interest forms with case manager	Weekly between start of emailing and enroll deadline	IMPAQ	Weekly 9/18 to 10/23	Weekly 1/16 to 2/20
Follow up with interest form completers	Weekly between start of emailing and enroll deadline	CNM	Weekly 9/18-10/23	Weekly 1/16-2/20
Send final reminder email to all individuals	1 week before school enroll deadline	IMPAQ	10/16/2017	2/13/18
Deadline to Enroll in School	IMPAQ decision	IMPAQ	10/23/2017	2/20/2018
Data Collection Activities				
First data submission: Submits Outcomes Data (Outcome 3, 4, and 5)	See Exhibit 3	CNM	10/12/2017	2/5/2018
Second data submission: Submits Outcomes Data (Outcome 3, 4, and 5)	See Exhibit 3	CNM	10/27/2017	3/5/2018
Third data submission: Submits Outcomes Data (Outcome 3, 4, and 5)	See Exhibit 3	CNM	11/13/2017	4/20/2018
Status update transmissions (Outcomes 1 & 2 only) with demographics and other data elements as agreed	Weekly between start of emailing and enroll deadline	DWS	Weekly 9/18 to 10/23	Weekly 1/16 to 2/20
First data submission: Evaluation team compiles interest form data (Outcome 3,4,5) and sends to DWS for merging	Three days after a CNM transmission	IMPAQ	10/18/2017	3/9/2018

Activity	Timeline	Acting Party	Fall 2017 Cohort	Spring 2018 Cohort
First data submission: DWS merges and returns the de-identified dataset to evaluation team (All Outcomes)	1 week after receiving data from IMPAQ	**DWS**	11/2/2017	3/16/2018
Second data submission: Evaluation team compiles interest form data (Outcome 3,4,5) and sends to DWS for merging	Three days after a CNM transmission	**IMPAQ**	11/3/2017	4/23/2018
Second data submission: DWS merges and returns the de-identified dataset to evaluation team (All Outcomes)	1 week after receiving data from IMPAQ	**DWS**	11/10/2017	4/30/2018
Third data submission: Evaluation team compiles interest form data (Outcome 3,4,5) and sends to DWS for merging	Three days after a CNM transmission	**IMPAQ**	11/16/2017	
Third data submission: DWS merges and returns the de-identified dataset to evaluation team (All Outcomes)	1 week after receiving data from IMPAQ	**DWS**	11/22/2017 -	

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IMPAQ International, LLC

Non-Traditional Occupations Demonstration

Draft Site-Specific Procedures Manual – Apprenticeship & Nontraditional Employment for Women

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SITE-SPECIFIC PROCEDURES MANUAL:
APPRENTICESHIP AND
NONTRADITIONAL EMPLOYMENT FOR WOMEN

The purpose of this manual is to provide detailed procedures to be followed in the implementation of the Non-Traditional Occupation Demonstration conducted by IMPAQ at the South Seattle Community College American Apprenticeship Initiative (AAI) grant. Specifically, this manual refers to the roles and responsibilities of Apprenticeship and Nontraditional Employment for Women (ANEW) grant staff. IMPAQ will be advertising for the ANEW AAI grant program *(Pre-Apprenticeship Trades Rotation Training Program)* in the demonstration's recruitment materials.

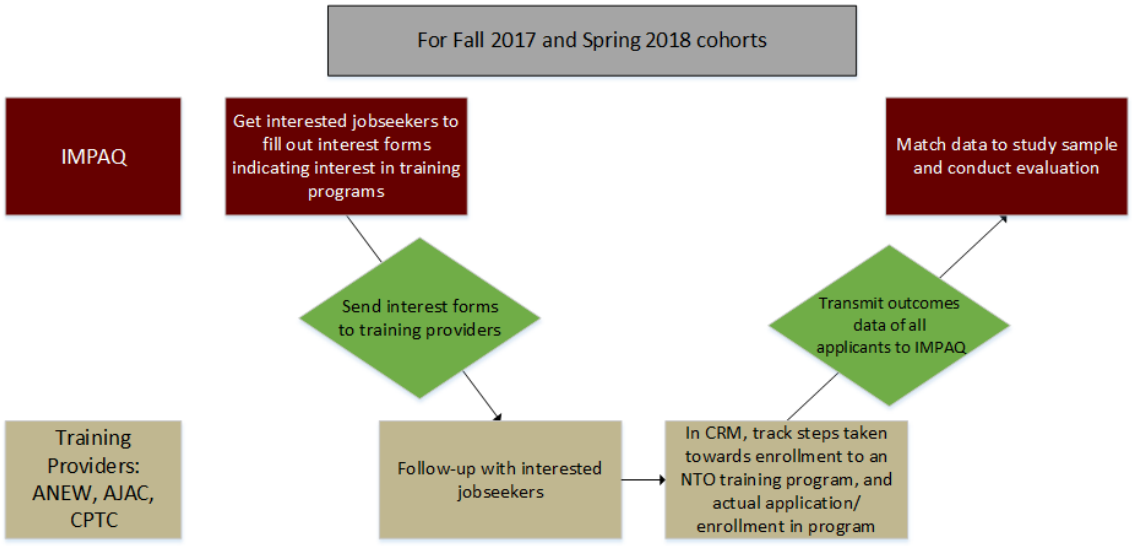
South Seattle Community College (South Seattle) and its AAI grant training partners— Apprenticeship & Nontraditional Employment for Women (ANEW), Aerospace Joint Apprenticeship Committee (AJAC), and Clover Park Technical College (CPT)— will support the implementation of IMPAQ's demonstration to recruit women into non-traditional occupations (NTOs). Recent female jobseekers and their contact information will be retrieved from the Washington Employment Security Division (ESD). These individuals will be contacted by IMPAQ and considered study participants.

Participants will be referred to the AAI-grant funded programs operated by South Seattle's training partners, including ANEW. To support this demonstration, *ANEW will:*

- ***Follow-up with study participants that express interest in the Pre-Apprenticeship Trades Rotation Training Program training program on a weekly basis and;***
- ***Share data with IMPAQ on the specific actions taken by these individuals to either enroll or learn more about the program on a monthly basis.***

The information to be shared by ANEW is critical to allow IMPAQ to measure the impact of the demonstration's recruitment efforts. No new data will be collected; we require only data already tracked by ANEW. This process is summarized in Exhibit 1 below.

Exhibit 1. ANEW Procedures Process Summary



At ANEW, the demonstration will focus on recruitment for two cohorts: Fall 2017and Spring 2018. The anticipated activities and dates for each ANEW cohort are provided in Exhibit 2. All activities and the general timeline of activities will be similar for each cohort. ***Please note that these dates are based on preliminary dates*** given by ANEW and are subject to change.

IMPAQ conducted a site visit to ANEW on July 12th, 2017 to learn more about the ANEW program content and existing procedures for recruitment and enrollment, review the recruitment process and procedures for the demonstration, train relevant staff regarding all data transfer activities as well as all other activities discussed in this manual, and answer any questions or concerns about study activities. The site visit also provided time to review the final recruitment content with ANEW and gather final feedback. ***ANEW noted that Morgan Stonefield, Advocacy Program manager, will be the IMPAQ point of contact for the demonstration as well as the data liaison responsible for the data transfers to IMPAQ (with the support of other ANEW staff).***

The following sections review the training provider responsibilities related to prospective applicant follow-up, the data transmission schedule, tracking and reporting outcomes, the data transfer process, and preparing for the demonstration. Section 6 outlines IMPAQ's data security and confidentiality procedures. **Appendix 1 presents easy reference checklists for training program staff to refer to when conducting prospective applicant follow-up, preparing data files for submission, and submitting data.**

Exhibit 2. Activities and General Timeline of Activities for Each Cohort

Activity	Timeline	Action Required from Training Partner?	Fall 2017 Cohort	Spring 2018 Cohort

Confirm enrollment dates for cohort	8 weeks before school enroll deadline	Yes – Provide/confirm dates	7/17/2017	1/21/2018
IMPAQ requests jobseeker data from ESD (due 1 week later)	8 weeks before school enroll deadline	No	7/17/2017	1/21/2018
IMPAQ sends Initial Recruitment Email	6 weeks before school enroll deadline	No	7/31/2017	2/5/2018
IMPAQ sends 1st Reminder Email	5 weeks before school enroll deadline	No	8/7/2017	2/12/2018
IMPAQ sends 2nd Reminder Email	4 weeks before school enroll deadline	No	8/14/2017	2/19/2018
IMPAQ mails Recruitment post-card	3 weeks before school enroll deadline	No	8/21/2017	2/26/2018
IMPAQ sends 3rd Reminder Email	3 weeks before school enroll deadline	No	8/21/2017	2/26/2018
IMPAQ sends 4th Reminder Email	2 weeks before school enroll deadline	No	8/28/2017	3/5/2018
IMPAQ sends post-interest form reminder email to those who have completed interest form	To be sent between 1 week after start of emailing and up to the enroll deadline (emails are sent automatically 1-2 days after completing form)	No	7/31-9/11	2/4-3/18
IMPAQ shares interest forms with case manager	**Weekly between start of emailing and class start date**	**Yes – follow-up with interested jobseekers on a weekly basis**	**Weekly 7/31-9/25**	**Weekly 2/4-4/1**
IMPAQ sends final reminder email, different versions to those that completed and did not complete the interest form	1 week before school enroll deadline	No	9/5/2017	3/12/17
Training provider submits outcomes data	**Monthly**	**Yes – send IMPAQ outcomes data**	**See Exhibit X below**	
Deadline to Enroll in School	2 weeks before Class Start Date	No	9/11/2017	3/18/2018
Class Start Date	Based on training partner schedule	No	9/25/2017	4/2/2018
Classes End Date	Based on training partner schedule	No	12/15/2017	6/19/2018

Note: IMPAQ will share interest form data with the case manager on a continual basis outside of the current cohort recruitment window. The case manager should provide any interested individuals that complete the interest form with information on the program and the next available program dates.

1. Follow-up with Prospective Applicants

On a weekly basis during the active outreach periods (emails, postcards, and follow-up) between August 2017 and March 2018, IMPAQ will share with ANEW the names and contact information of all women jobseekers who complete the interest form (i.e., express interest in participating in the ANEW AAI–grant funded training program via the demonstration websites. ANEW staff will then follow up with interested individuals regarding the Pre-Apprenticeship Trades Rotation

Training Program program's intake/enrollment process via email and/or phone to provide more information on the training program as well as outline the steps for application.

IMPAQ expects that interested individuals will be contacted within a week after their interest form is shared with ANEW staff. ANEW staff will track follow-up activities in their Customer Relations Management System (CRM) and confirm, on a weekly basis, that follow-up with all interested individuals has been completed. See Appendix 1 for the Prospective Applicant Follow-up Checklist.

2. Data Transmission Schedule

ANEW should provide data submissions to IMPAQ according to the schedule specified in Exhibit 3. For each data transfer, ANEW should include data for **all individuals** in ANEW's CRM **within the date ranges specified in the schedule.** IMPAQ will use these data to identify which of our study participants took steps toward enrollment in your program. The data transfer does not need to identify which individuals were and were not referrals from IMPAQ's interest forms.

Exhibit 3. Data Transmission Schedule

Data Transmission	Data Transmission to IMPAQ Date	Date Range
1st transmission	9/05/2017	7/01/2017 - 8/31/2017
2nd transmission	10/05/2017	9/01/2017 - 9/30/2017
3rd transmission	11/06/2017	10/01/2017 – 10/31/2017
4th transmission	12/05/2017	11/01/2017 – 11/30/2018
5th transmission	1/05/2018	12/01/2017 – 12/31/2017
6th transmission	2/05/2018	1/4/2018 – 1/31/2018
7th transmission	3/05/2018	2/01/18 – 2/28/2018
8th transmission	4/05/2018	3/01/18 – 3/31/2018
9th transmission	4/20/2018	4/01/18 – 4/15/2018

3. What Outcomes to Track and Report

This demonstration requires specific data to measure the outcomes of the individuals who receive our recruitment content. These will be drawn from existing data ANEW already collects. ***Data on two outcomes are to be transferred: steps taken towards application and application status.*** Details on these outcomes are shown in Exhibit 4.

Exhibit 4. Outcomes Summary

IMPAQ's data needs for these two outcomes for our study participants are described below.

- **Outcome #1 – Steps taken towards application by interested applicants**: These actions will be defined as any steps required to be completed before application and enrollment in the classes considered to be part of the Pre-Apprenticeship Trades Rotation Training Program. For each data submission, IMPAQ will need data on any pre-application activity tracked in ANEW's CRM, for all individuals who expressed interest in the Pre-Apprenticeship Trades Rotation Training Program during the date ranges specified in Exhibit 3—including attending information sessions held prior to class enrollment, meeting in person with grant staff or career counselors, and calling or emailing grant staff or career counselors for more information. Dates of steps taken should also be included.

- **Outcome #2 – Application status of interested applicants**: Our analysis requires us to obtain data on application status. We are also interested in learning if students enroll in other classes that lead into non-traditional occupations. IMPAQ is interested in the following information for women jobseekers who contact ANEW from our contact list for all enrollment from June 2017-March 2018:
    - No application received
    - Incomplete application
    - Completed application
    - Enrollment in the Pre-Apprenticeship Trades Rotation Training Program course
    - Achieved other employment outcomes (such as direct placement into employment, referral to other training program, or case management services)

To obtain these data, ANEW should share application information and student-level class enrollment in AAI grant classes and classes outside the AAI grant program within related non-traditional fields in each data transfer.

The data transfer should include this information for all individuals who express interest in the program through IMPAQ interest form referrals or otherwise.

IMPAQ will perform the matching of names/dates of birth (DOBs) ourselves. To be able to do this, we will need ANEW to include all available identifying data for all individuals in the CRM during the date ranges specified who expressed interest in the program from all sources (IMPAQ interest form referrals or otherwise).

To summarize, it is expected that each data transfer will include the following data elements for ***all students who expressed interest in the Pre-Apprenticeship Trades Rotation Training Program during the date ranges specified in Exhibit 3:***

- Identifying data:
    - Full Name (first, middle, last)
    - Phone Number
    - Email Address
    - Mailing Address
    - DOB
    - Other available identification data that can be shared
- Outcomes data
    - Steps taken towards application/enrollment
        1. In-person meeting with program staff
        2. Emailing program staff for more information
        3. Phone call to program staff for more information
        4. Attended orientation/info session
    - Application Update
        1. No application received
        2. Incomplete application and date of receipt
        3. Completed application and date of receipt
        4. Enrolled in Pre-Apprenticeship Trades Rotation Training Program course with date of enrollment
        5. Achieved other employment outcomes (such as direct placement into employment, referral to other training program, or case management services)

The format for submitting the data depends on the training provider's CRM. Exhibit 5 provides a sample format for submitting the data request. This sample is illustrative to demonstrate the data exchanges that occurred for this study. To minimize staff burden, it is not necessary to clean or reshape your data to match this format, and thus the transfer could involve multiple sheets/files with different data sources, **as long as information for the same individual can be linked by name and other unique identifying information, as mentioned above.**

During the site visit, ANEW staff agreed submit data on outcomes #1 and #2 using three different reports from their CRM:

- ***Applicant Pool List (consisting of first name, last name, middle initial, DOB, email address, other contact details, date of each steps, email and phone inquiries, attendance at information sessions, and application submission)***
- ***Enrollment Report TRP***
- ***Enrollment Report AOP (case-management services)***

****Please note that individual identifying information is to be provided with each list. This should consist of first name, last name, middle initial, DOB, email address, other contact details, and any other identifying information you can provide).***

Each report will be exported to Excel before sharing with IMPAQ. ANEW will ensure that each report includes sufficient identifying data on each individual to allow IMPAQ to link the individuals across each data source. See Appendix 1 for the Prepare Data for Submission Checklist.

Exhibit 5. Sample Data Transfer File

Available Identifying Data						
First Name	**Middle Name**	**Last Name**	**Phone Number**	**Email Address**	**Mailing Address**	**Date of Birth**
Jane	Mary	Doe	123-456-7890	Jane.doe@example.com	123 Example St.	1-23-1986
John	Smith	Doe	123-456-7891	John.doe@example.com	567 Example St.	4-13-1972
Jill	Elizabeth	Doe	123-456-7894	Jill.smith @example.com	234 Example St.	6-3-1989
James	Peter	Smith	123-456-7896	James.smith@example.com	456 Example St.	2-13-1982

Outcomes data							
Attended Information Session?	**Date Attended**	**Phone/ Email Inquiry from jobseeker?**	**Date of Inquiry**	**Application Status**	**Date Application Received**	**Enrolled in at least one Pre-Apprenticeship Trades Rotation Training Program class?**	**Achieved Other Employment Outcome?**
Yes	1/5/2015	Yes	1/10/2015	Enrolled	1/12/2015	Yes	Yes
No		No		Completed Application	1/12/2015	No	Yes
Yes	1/5/2015	No		None received		No	No
Yes	1/7/2015	Yes	1/12/2015	Incomplete Application	1/24/2015	No	No

4. Data Transfer Process

Training providers will extract the requested data and submit to IMPAQ in Excel or similar data file. This transmission method should use the following steps:

1. Identify all individuals in CRM during date range specified in Exhibit 3. This should include individuals entered into the CRM from all sources, IMPAQ interest form referrals or otherwise.
2. For these individuals, export all data elements listed previously into an excel sheet or similar file.
3. Send IMPAQ the file via IMPAQ's Secure File Transfer Protocol (SFTP) service. Usernames and passwords will be sent separately to each organization.
    a. Go to https://sftp.impaqint.com.
    b. Enter assigned username and password.
    c. Click on "Upload files" in the upper-left hand corner, and select the outcomes files from your computer to upload.
    d. Email Luke Patterson (lpatterson@impaqint.com) and Carolyn Corea (ccorea@impaqint.com) let them know the files have been uploaded.
4. Send IMPAQ via SFTP any records of outcomes achievement that are not located in the CRM.
    a. For example, if information session attendance sheets are stored only on paper, those would be scanned to IMPAQ and uploaded to the SFTP site in the same manner.

See Appendix 1 for the "Submit Data" Checklist.

5. Demonstration Support

To prepare for the data transfers, IMPAQ conducted an in-person review of all procedures during the July 2017 site visit to review the data elements needed and the data transfer process. In addition to this review, the first data transfer for the Fall 2017 cohort will include a thorough review process to ensure that all required data are being transferred in the appropriate format. In this review, IMPAQ will check that all data elements requested are included, that the outcomes of application status and steps taken toward enrollment are properly defined and reported, and that individuals with the correct dates of first contact are included in the transmission. This process may involve revised data submissions from training partners to refine the data and submission format.

If at any time during the data transfer process questions or concerns arise for IMPAQ, please feel free to contact Luke Patterson (lpatterson@impaqint.com or 443.259.5239) or any other member of the IMPAQ team.

6. Data Confidentiality and Security

For these data transfers, IMPAQ is committed to protecting both participant- and organization-sensitive data through our data security protocol, which consists of internal policies and

procedures. This protocol enables IMPAQ to receive, transmit, and store data; and properly segregate, protect, and control the access to and availability of data. IMPAQ will use secure and encrypted data transfer processes to ensure the security of these sensitive data. IMPAQ will not use any data received via this agreement for any purpose other than this demonstration and evaluation. IMPAQ will destroy all its copies of non-study participant data after the study has been completed.

APPENDIX 1: DEMONSTRATION CHECKLISTS: PROSPECTIVE APPLICANT FOLLOW-UP, PREPARE DATA FOR SUBMISSION, SUBMIT DATA

This appendix presents quick checklists for the 3 program-specific demonstration tasks: prospective applicant follow-up, preparing for data submission, and data submission.

Prospective Applicant Follow-up

1. Receive weekly update from IMPAQ with individuals and their contact information who completed the interest form.
2. Enter names and contact information into CRM/program database.
3. Within a week, follow-up with each individual who completed the interest form via email (or phone) to provide them with:
    a. The program's intake/enrollment process, including information session dates and locations
    b. Relevant enrollment dates
    c. Details on the training program
    d. Application steps
4. Assuming email is used for follow up, cc nto@impaqint.com on follow-up emails sent. If follow-up is conducted via phone or other mode, document follow-up in CRM/program database/excel file.
5. On weekly basis, confirm with IMPAQ that follow-up has been completed. If all follow-up is done via email and nto@impaqint.com is cc'd this step is not required.

Prepare Data for Submission

1. Prepare data file that contains the following data elements for individuals in your CRM during the date range specified in the data submission schedule:
    a. Identifying Data
        i. Full Name (First, middle, last)
        ii. Phone Number
        iii. Email Address
        iv. Mailing Address
        v. DOB
        vi. Other available identification data that can be shared
    b. Outcomes data
        i. Steps taken towards application/enrollment
            1. In-person meeting with program staff
            2. Emailing program staff for more information

3. Phone call to program staff for more information
4. Attended orientation/info session

ii. Application Update
1. No application received
2. Incomplete application and date of receipt
3. Completed application and date of receipt
4. Enrolled in the Pre-Apprenticeship Trades Rotation Training Program course with date of enrollment

iii. Achieved other employment outcomes (such as direct placement into employment, referral to other training program, or case management services)

2. Prepare supporting data files that include any data elements not included in the main data file. Ensure that any supporting data files include identifying data elements that will allow us to link the participant information by name or some other unique identifier to the main data file. For example, if you are providing an information session attendance sheet, please ensure that the document includes first name, last name, and another unique identifier such as DOB.
3. Reference data submission schedule to determine the next upcoming data submission date.

Data Transmission	Data Transmission to IMPAQ Date	Date Range
1st transmission	9/05/2017	7/01/2017 - 8/31/2017
2nd transmission	10/05/2017	9/01/2017 - 9/30/2017
3rd transmission	11/06/2017	10/01/2017 – 10/31/2017
4th transmission	12/05/2017	11/01/2017 – 11/30/2018
5th transmission	1/05/2018	12/01/2017 – 12/31/2017
6th transmission	2/05/2018	1/4/2018 – 1/31/2018
7th transmission	3/05/2018	2/01/18 – 2/28/2018
8th transmission	4/05/2018	3/01/18 – 3/31/2018
9th transmission	4/20/2018	4/01/18 – 4/15/2018

Submit Data

5. Send IMPAQ the file via IMPAQ's SFTP service. Usernames and passwords will be sent separately to each organization.
   a. Go to https://sftp.impaqint.com
   b. Enter assigned username and password
   c. Click on "Upload files" in the upper-left hand corner, and select the outcomes files from your computer to upload.
   d. Email Luke Patterson (lpatterson@impaqint.com) and Carolyn Corea (ccorea@impaqint.com) to let them know the files have been uploaded.

6. Send IMPAQ via SFTP any records of outcomes achievement not located in the CRM.

a. For example, if information session attendance sheets are stored only on paper, those should be scanned to IMPAQ and uploaded to the SFTP site in the same manner.

IMPAQ International, LLC

Non-Traditional Occupations Demonstration

Draft Site-Specific Procedures Manual –

Central New Mexico Community College

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SITE-SPECIFIC PROCEDURES MANUAL:
CENTRAL NEW MEXICO COMMUNITY COLLEGE

The purpose of this manual is to provide detailed procedures to be followed in the implementation of the Non-Traditional Occupation Demonstration conducted by IMPAQ with the Central New Mexico Community College American Apprenticeship Initiative (AAI) grant. Specifically, this manual refers to the roles and responsibilities of Central New Mexico Community College (CNM) grant staff. IMPAQ will be recruiting participants for the CNM AAI grant program *(New Mexico Information Technology Apprenticeship Program)* in the demonstration's outreach materials.

CNM will support the implementation of IMPAQ's demonstration to recruit women into non-traditional occupations (NTOs). Recent female jobseekers and their contact information will be identified by the New Mexico Department of Workforce Solutions (NMDWS). These individuals will be contacted by NMDWS and considered to be the study's research population.

These participants will be referred to the AAI-grant funded program operated by CNM. To support this demonstration, *CNM will:*

On a weekly basis, follow-up with study participants that express interest in CNM's NMITAP training program and;

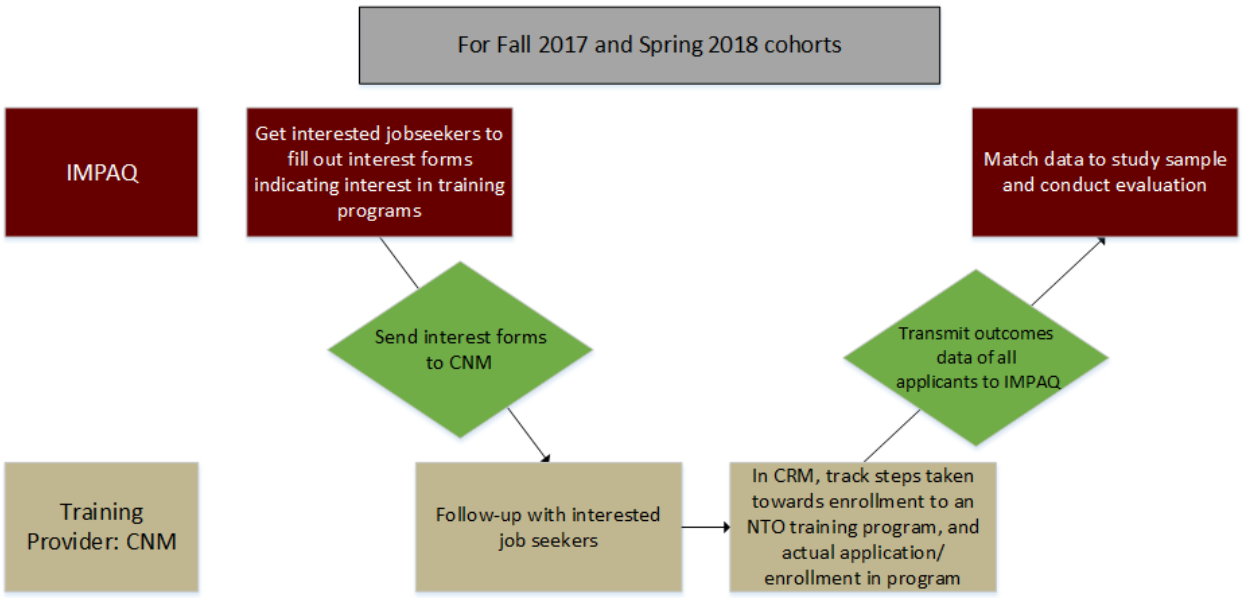
On a monthly/bi-monthly basis[39], share data with IMPAQ on the specific actions taken by these individuals to either enroll or learn more about the program.

The information to be shared by CNM is critical to allow IMPAQ to measure the impact of the demonstration's recruitment efforts. No new data will be collected; we require only data already tracked by CNM.

The steps involved in this process are summarized in Exhibit 1 below. The maroon blocks list steps performed by IMPAQ and the tan blocks list steps performed by CNM.

[39] As shown in Exhibit 4 there are two required submissions in the first and last months of the demonstration.

Exhibit 1. CNM Procedures Process Summary



The demonstration will focus on recruitment for two cohorts: the Fall 2017and Spring 2018 cohorts. The anticipated activities and dates for each cohort are provided below in Exhibit 2. All activities and the general timeline of activities will be similar for each cohort. ***Please note that these dates are subject to slight changes given any necessary adjustments to the demonstration timeline.***

IMPAQ conducted a site visit to CNM on August 29th 2017 to learn more about the CNM program content and existing procedures for recruitment and enrollment, review the recruitment process and procedures for the demonstration, train relevant staff regarding all data transfer activities as well as all other activities discussed in this manual, and answer any questions or concerns about study activities. The site visit was used to review the final recruitment content with CNM and gather final feedback. On this site visit, we spent 2-3 hours with CNM staff. CNM should provide IMPAQ a point of contact within their organization to serve as the data liaison responsible for the data transfers to IMPAQ.

Exhibit 2. Activities and General Timeline of Activities for each Cohort

Activity	Timeline	Acting Party	Fall 2017 Cohort	Spring 2018 Cohort
IMPAQ sends final materials to DWS to send out	6 weeks before school enroll deadline	**IMPAQ**	9/11/2017	1/9/2018
CNM begins holding information sessions	3 weeks before school enroll deadline (3 sessions per cohort)	**CNM**	10/05/2017 10/12/2017 10/19/2017	2/1/2018 2/8/2018 2/15/2018
IMPAQ shares interest forms with case manager	Weekly between start of emailing and enroll deadline	**IMPAQ**	Weekly 9/18-10/23	Weekly 1/22-2/19
CNM follows up with interest form completers	Weekly between start of emailing and enroll deadline	**CNM**	Weekly 9/18-10/23	Weekly 1/22-2/19
Deadline to Enroll in School	IMPAQ decision	**IMPAQ**	10/23/2017	2/20/2018

The following sections review CNM's responsibilities related to prospective applicant follow-up, the data transmission schedule, tracking and reporting outcomes, the data transfer process, and preparing for the demonstration. The final section outlines IMPAQ's data security and confidentiality procedures. **Appendix A presents easy reference checklists for training program staff to refer to when conducting prospective applicant follow-up, preparing data files for submission, and submitting data.**

1. Follow-up with Prospective Applicants

On a weekly basis during the active outreach periods (emails, postcards, and follow-up) between September 2017 and March 2018[40], IMPAQ will share with CNM the names and contact information of all women jobseekers who complete the interest form i.e. express interest in participating in the CNM AAI-grant funded training program via the demonstration websites. CNM staff will then follow-up with interested individuals regarding the NMITAP program's intake/enrollment process via email to provide more information on the training program as well as outline the steps for application.

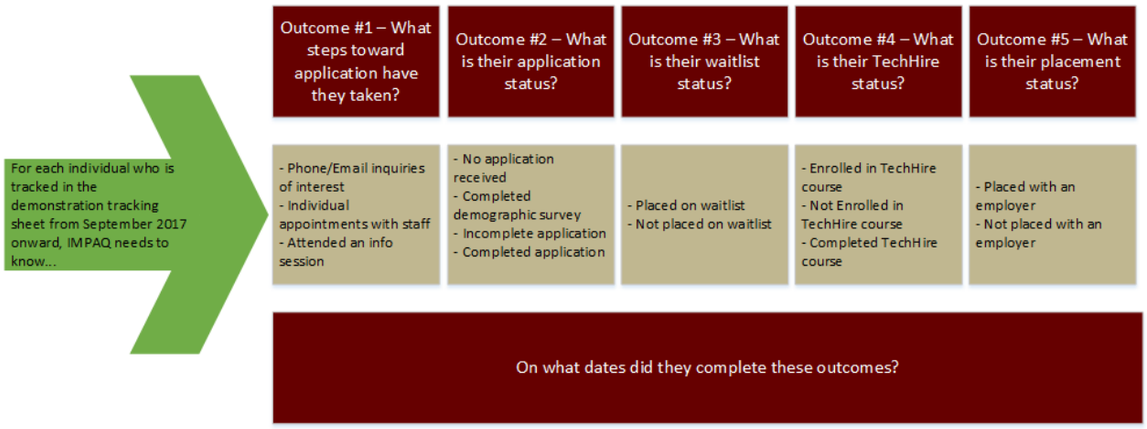
IMPAQ expects that interested individuals will be contacted within a week after their interest form is shared with CNM staff. CNM staff will track follow-up activities in an excel tracking sheet and confirm, on a weekly basis, that follow-up with all interested individuals has been completed. See Appendix A for the Prospective Applicant Follow-up Checklist.

2. What Outcomes to Track and Report

This demonstration requires specific data to measure the outcomes of the individuals that receive our recruitment content. These will be drawn from existing data CNM already collects. ***Data on five outcomes are to be transferred to IMPAQ: steps taken towards application, application status, waitlist status, TechHire status, and placement status.*** Details on these outcomes are shown in Exhibit 3.

[40] The active outreach period for each cohort begins on the date of the initial email and ends on the deadline to enroll.

Exhibit 3. Outcomes Summary



IMPAQ's data needs for these three outcomes are described below. Exhibit 5 presents a sample format for submitting the required data.

Outcome #1 – Steps taken towards application by interested applicants: These actions will be defined as any steps required to be completed before application and enrollment in the classes and on the job training considered to be part of the NMITAP program. For each data submission, IMPAQ will need data on any pre-application activity tracked in CNM's CRM for all individuals who expressed interest in the NMITAP program during the date ranges specified in Exhibit 4, including attending information sessions held prior to class enrollment, meeting in-person with grant staff or career counselors, and calling or emailing grant staff or career counselors for more information. Dates of steps taken should also be included.

Outcome #2 –Application status of interested applicants: Our analysis requires us to obtain data on application status. IMPAQ is interested knowing the current application status for women jobseekers who contact CNM from our contact list beginning in September 2017-March 2018 with status identified as one of the following:

- No application received
- Completed demographic survey
- Incomplete application
- Completed application

Outcome #3 – Waitlist Status: Our analysis requires us to obtain data on waitlist status. We are interested in knowing the current waitlist status for women jobseekers who contact CNM from our contact list beginning in September 2017- April 2018 with status identified as one of the following:

Placed on waitlist
Not placed on waitlist

Outcome #4: What is their TechHire status? Our analysis requires us to obtain data on TechHire status. We are interested in knowing the current TechHire status for women jobseekers who contact CNM from our contact list beginning in September 2017- April 2018 with status identified as one of the following:

- Enrolled in TechHire course
- Not enrolled in TechHire course
- Completed TechHire course

Outcome #5: Our analysis requires us to obtain data on placement status. IMPAQ is interested in knowing the placement status for women jobseekers who contact CNM from our contact list beginning in September 2017- April 2018 with status identified as one of the following:

Placed with an employer
Not placed with an employer

As discussed, CNM plans to track and share this data in an excel tracking sheet that includes fields for all the required data.

As shown in Exhibit 5, CNM must include all available identifying data for all individuals in the CRM during the date ranges specified that expressed interest in the program from. *The data transfer should include outcomes of interest for all individuals that express interest in the program through IMPAQ interest form referrals or other means.*

To summarize, it is expected that each data transfer will include the following data elements for ***all students who completed any of the outcomes of interest during the date ranges specified in Exhibit 4:***

- Identifying Data:
    - Full Name (First, middle, last)
    - Phone Number
    - Email Address
    - Mailing Address
    - DOB
    - Other available identification data that can be shared (SSN)
- Outcomes data:
- Outcome 1: Steps Taken Towards Application by Interested Applicants
    - In-person meeting with program staff
    - Emailing program staff for more information
    - Phone call to program staff for more information
    - Attended orientation/info session
- Outcome 2: Application Status of Interested Applicants
    - No application received
    - Completed demographic survey
    - Incomplete application
    - Completed application
- Outcome 3: Waitlist status
    - Placed on waitlist
    - Not placed on waitlist
- Outcome 4: TechHire Status
    - Enrolled in TechHire course
    - Not enrolled in TechHire course
    - Completed TechHire course
- Outcome 5: Placement Status
    - Placed with an employer
    - Not placed with an employer

CNM will submit this data in an excel tracking sheet. Exhibit 5 provides a sample format for submitting the data request. This sample is provided for illustrative purposes only. To minimize staff burden, it is not necessary to clean or reshape your data to match this format. This means that the transfer could involve multiple sheets/files with different data sources, **as long as information for the same individual can be linked by name or some other unique identifier.**

3. Data Transmission Schedule

CNM should provide data submissions to IMPAQ according to the schedule specified in Exhibit 4 below. For each data transfer, CNM should include outcomes data for **all individuals** in CNM's CRM **within the date ranges specified in the schedule.** IMPAQ will use this data to identify which of our study participants took steps toward enrollment in your program. The data transfer does not need to identify which individuals were and were not referrals from IMPAQ's interest forms.

Exhibit 4. CNM Data Transmission Schedule

Data Transmission	Data Transmission to IMPAQ Date	Date Range
1st transmission	10/12/2017	9/01/2017 - 10/11/2017
2nd transmission	10/27/2017	10/12/2017-10/26/2017
3rd transmission	11/13/2017	10/27/2017 – 11/12/2017
4th transmission	12/05/2017	11/13/2017 – 11/30/2018
5th transmission	1/05/2018	12/01/2017 – 12/31/2017
6th transmission	2/05/2018	1/01/2018 – 1/31/2018
7th transmission	3/05/2018	2/01/18 – 2/28/2018
8th transmission	4/05/2018	3/01/18 – 3/31/2018
9th transmission	4/20/2018	4/01/18 – 4/15/2018

See Appendix A for a checklist for preparing data for submission.

Exhibit 5. Sample Data Transfer File

Available Identifying Data						
First Name	Middle Name	Last Name	Phone Number	Email Address	Mailing Address	Date of Birth
Jane	Mary	Doe	123-456-7890	Jane.doe@ example.com	123 Example St.	1-23-1986
John	Smith	Doe	123-456-7891	John.doe@ example.com	567 Example St.	4-13-1972
Jill	Elizabeth	Doe	123-456-7894	Jill.smith @ example.com	234 Example St.	6-3-1989
James	Peter	Smith	123-456-7896	James.smith@ example.com	456 Example St.	2-13-1982

Outcomes data							
Attended Information Session?	Date Attended	Phone/ Email Inquiry from jobseeker?	Date of Inquiry	Application Status	Date Application Received	Enrolled in at least one Pre-Apprenticeship Trades Rotation Training Program class?	Achieved Other Employment Outcome?
Yes	1/5/2015	Yes	1/10/2015	Enrolled	1/12/2015	Yes	Yes
No		No		Completed Application	1/12/2015	No	Yes
Yes	1/5/2015	No		None received		No	No
Yes	1/7/2015	Yes	1/12/2015	Incomplete Application	1/24/2015	No	No

4. Data Transfer Process

CNM will extract the requested data and submit to IMPAQ in Excel or similar data file. Using this transmission method, the following steps would be involved:

Identify all individuals in CRM during date range specified in Exhibit 4. This should include individuals entered into the CRM from all sources, IMPAQ interest form referrals or other means.

For these individuals, export all data elements listed previously into an excel sheet or similar file.

Send IMPAQ the file via IMPAQ's Secure File Transfer Protocol (SFTP) service. Usernames and passwords will be sent separately to each organization.

Go to https://sftp.impaqint.com

Enter assigned username and password

Click on "Upload files" in the upper-left hand corner, and select the outcomes files from your computer to upload.

Email Luke Patterson (lpatterson@impaqint.com) and Carolyn Corea (ccorea@impaqint.com) and let them know the files have been uploaded.

Send IMPAQ via SFTP any records of outcomes achievement that are not located in the CRM.

For example, if information session attendance sheets are stored only on paper, those would be scanned to IMPAQ and uploaded to the SFTP site in the same manner.

See Appendix A for Submitting the Data Checklist.

5. Demonstration Support

To prepare for the data transfers, IMPAQ will conduct an in-person review of all procedures as part of the August 2017 site visit to review the data elements needed and the data transfer process. In addition to this review, the first data transfer for the Fall 2017 cohort will include a thorough review process to ensure that all required data is being transferred in the appropriate format. In this review, IMPAQ will check that all data elements requested are included, that the outcomes of application status and steps taken toward enrollment are properly defined and reported, and that individuals with the correct dates of first contact are included in the transmission. This process may involve revised data submissions from training partners to refine the data and submission format.

If at any time during the data transfer process questions or concerns arise for IMPAQ, please feel free to contact Luke Patterson (lpatterson@impaqint.com or 443.259.5239) or any other member of the IMPAQ team.

6. Data Confidentiality and Security

For these data transfers, IMPAQ is committed to protecting both participant and organization sensitive data through our data security protocol, which consists of internal policies and procedures. This protocol enables IMPAQ to receive, transmit, and store data, and properly segregate, protect, and control the access and availability of data. IMPAQ will use secure and encrypted data transfer processes to ensure the security of this sensitive data. IMPAQ will not use any data received via this agreement for any purpose other than this demonstration and evaluation. IMPAQ will destroy all of its copies of non-study participant data after the study has been completed.

APPENDIX A: DEMONSTRATION CHECKLISTS: PROSPECTIVE APPLICANT FOLLOW-UP, PREPARE DATA FOR SUBMISSION, SUBMIT DATA

This appendix presents quick checklists for the 3 program specific demonstration tasks: prospective applicant follow-up, preparing for data submission, and submitting the data.

Prospective Applicant Follow-up

1. Receive weekly update from IMPAQ with individuals and their contact information who completed the interest form.
2. Enter names and contact information into CRM/program database/excel file.
3. Within a week, follow-up with each individual that completed the interest form via email to provide them with:
    a. The program's intake/enrollment process including information session dates and locations
    b. Relevant enrollment dates
    c. Details on the training program
    d. Application steps
4. Assuming email is used for follow up, cc' lpatterson@impaqint.com, nnanda@impaqint.com, and ccorea@impaqint.com on follow-up emails sent.
5. On weekly basis, confirm with IMPAQ that follow-up has been completed. If all follow-up is done via email and lpatterson@impaqint.com is cc'd this step is not required.

Prepare Data for Submission

1. Prepare data file that contains the following data elements for individuals in your CRM during the date range specified in the data submission schedule:
    a. Identifying Data
        i. Full Name (First, middle, last)
        ii. Phone Number
        iii. Email Address
        iv. Mailing Address
        v. DOB

vi. Other available identification data that can be shared (SSN) Outcomes data

b. Outcome 1: Steps Taken Towards Application by Interested Applicants
   i. In-person meeting with program staff
   ii. Emailing program staff for more information
   iii. Phone call to program staff for more information
   iv. Attended orientation/info session
c. Outcome 2: Application Status of Interested Applicants
   i. No application received
   ii. Completed demographic survey
   iii. Incomplete application
   iv. Completed application
d. Outcome 3: Waitlist status
   i. Placed on waitlist
   ii. Not placed on waitlist
e. Outcome 4: TechHire Status
   i. Enrolled in TechHire course
   ii. Not enrolled in TechHire course
   iii. Completed TechHire course
f. Outcome 5: Placement Status
   i. Placed with an employer
   ii. Not placed with an employer

2. Prepare supporting data files that include any data elements that are not included in the main data file. Ensure that any supporting data files include identifying data elements that will allow us to link the participant information by name or some other unique identifier to the main data file. For example, if you are providing an information session attendance sheet, please ensure that the document includes first name, last name, and another unique identifier such as date of birth.
3. Reference data submission schedule to determine the next upcoming data submission date.

Data Transmission	Data Transmission to IMPAQ Date	Date Range
1st transmission	10/12/2017	9/01/2017 - 10/11/2017
2nd transmission	10/27/2017	10/12/2017-10/26/2017
3rd transmission	11/13/2017	10/27/2017 – 11/12/2017
4th transmission	12/05/2017	11/13/2017 – 11/30/2018
5th transmission	1/05/2018	12/01/2017 – 12/31/2017
6th transmission	2/05/2018	1/01/2018 – 1/31/2018
7th transmission	3/05/2018	2/01/18 – 2/28/2018
8th transmission	4/05/2018	3/01/18 – 3/31/2018
9th transmission	4/20/2018	4/01/18 – 4/15/2018

Submit Data

4. Send IMPAQ the file via IMPAQ's Secure File Transfer Protocol (SFTP) service. Usernames and passwords will be sent separately to each organization.
    a. Go to https://sftp.impaqint.com
    b. Enter assigned username and password
    c. Click on "Upload files" in the upper-left hand corner, and select the outcomes files from your computer to upload.
    d. Email Luke Patterson (lpatterson@impaqint.com) and Carolyn Corea (ccorea@impaqint.com) let them know the files have been uploaded.
5. Send IMPAQ via SFTP any records of outcomes achievement that are not located in the CRM.
    a. For example, if information session attendance sheets are stored only on paper, those would be scanned to IMPAQ and uploaded to the SFTP site in the same manner.