



If You Can See It, You Can Be It: Pipelines for Women into the Trades

The building trades offer high-paying careers with competitive benefits without the need for a college degree. These careers therefore hold particular promise for individuals – such as women and Black and other minority ethnic groups – who, without college degrees, struggle to find and maintain high-paying, stable jobs. Construction careers aren't just critical to ending income inequality and providing women and Black and other minority ethnic groups economic security but they also bring a unique kind of empowerment that comes with work that allows you to point to a high-rise, a bridge, a road, and say: I built that!

In the US, entry into a union building trades career is through a debt-free apprenticeship - an effective “learn and earn” model with a long history of providing career ladders and pathways to economic prosperity. Nearly two-thirds of all U.S. registered apprentices are trained in the construction industry, and among these construction apprentices, 75 percent are trained in union joint labor-management training programs – known as joint apprentice training committees (JATCs). JATCs also offer journey worker upgrade skills training.

Apprenticeship combines supervised structured on the job training with job-related education (known as “Related Theoretical Instruction”). Apprentices receive wages during the on-the-job training phase of their apprenticeship which increase throughout the training program in accordance with a predefined wage progression scale. Apprentices learn by working directly under the supervision and tutelage of masters in the craft. The length of training varies by craft and generally ranges from 3 to 5 years.

Building Pathways is a non-profit organization based in Boston, Massachusetts, that is dedicated to increasing the participation, retention and advancement opportunities for women and Black and other minority ethnic groups in the union building trades. Building Pathways approaches this mission through an integrated supply and demand strategy¹ which seeks to increase the pipeline of diverse workers in the building trades workforce, while ensuring that there are employment, learning and advancement opportunities that lead to life long, family-sustaining careers in the union trades. To that end, we engage in 4 pillars of work:

1. Pre-apprenticeship or apprenticeship readiness training to prepare diverse workers for entry into a union apprenticeship program
2. Outreach to diverse groups to educate them about careers and apprenticeships in the union building trades
3. Advocacy and technical assistance on public policies and industry practices to ensure that diverse building trades workers receive equitable opportunities to employment, training and advancement
4. Delivery of a Respectful Workplace Program designed to provide all workers with the tools and support necessary to create and maintain a safe, inclusive and productive environment for everyone.

¹ The integrated supply and demand strategy was developed through the work of the Policy Group on Tradeswomen's Issues (PGTI), a regional collaboration of construction industry stakeholders crushing the barriers to good jobs for women in the construction trades. A synopsis of the supply/demand strategy is attached to this case study. PGTI also developed a Best Practice manual called “Finishing the Job Best Practices for a Diverse Workforce in the Construction Industry”, a how-to manual for recruiting and retaining women in the trades. Finishing the Job is available in the TBB Resource drive. Building Pathways co-convenes PGTI, which has been meeting regularly for over 13 years.

Through our collective work with other building trades apprenticeship programs², the Policy Group on Tradeswomen's Issues, industry stakeholders and other allies, we have succeeded in achieving 10.4% women in union building trades apprenticeships in Massachusetts, one of the highest rates in the country, and 30% people of color. The vast majority of Massachusetts women apprentices and apprentices of color are enrolled in union apprenticeship programs.

For purposes of this case study, we will focus on the first 2 areas of our work that create pipelines for women and Black and other minority ethnic groups to access and succeed in a union apprenticeship program.

Supply Pipelines into Apprenticeship

1. Pre-Apprenticeship Training Programs

Quality building trades pre-apprenticeship training programs (also known as apprenticeship readiness programs or apprenticeship preparedness programs), such as Building Pathways, ANEW and Oregon Tradeswomen, are dedicated to addressing the historical disparities in race and gender in the building trades workforce by: 1) increasing the diversity of apprenticeship candidates by recruiting women and Black and other minority ethnic groups, and 2) Increasing the retention rate among diverse apprentices by providing them with a deeper understanding of both the industry and the role of trade unions in construction, as well as offering other supports.

The Building Pathways Building Trades Pre-Apprenticeship Training Program was launched in 2011 by the Greater Boston Building Trades Unions (GBBTU), a local building trades council that unites 20 building and construction trade local unions that operate within the greater Boston area dedicated to improving the standard of living for members and their families. In 2015, Building Pathways was incorporated as an independent non-profit organization, while maintaining close ties with the building trades, leaders of which serve on its Board.

Building Pathways provides 200+ hours of high quality, free, classroom and hands-on training, industry certifications, supportive services, and placement in building trades apprenticeship programs and employment. The main components of our training program include:

- Partnerships
- Outreach & Recruitment
- Application & Assessment
- Employability and Occupational Skills Training
- Case Management
- Career Coaching and Apprenticeship/Job Placement
- Retention and Other Support

- **Partnerships**

Key to Building Pathways' success is its longstanding rich partnerships with industry stakeholders, and community- based organizations and government agencies, among other allies.

As noted above, we have union representation on our Board of Directors, participate in building trades council meetings, and are members of an apprenticeship training directors' association. We also maintain an Employer Advisory Committee representing over 50 contractors, developers and employer associations. These industry

² Massachusetts has 6 union-affiliated building trades apprenticeship programs serving residents across the state. All of these programs were modeled after Building Pathways Boston.

allies help to inform best practices to ensure that our training is industry-relevant, participate in applicant recruitment and assessment, deliver training and host field trips, provide viable placement opportunities, and partner in other activities to create a more diverse and inclusive construction workforce.

In 2022, Building Pathways also created the Tradeswomen Advisory Committee (TAC) comprised of 9 tradeswomen representing multiple trades, 3 of whom are Building Pathways graduates. The TAC provides input on Building Pathways programming as it relates specifically to recruiting and retaining tradeswomen, and serves to support women career seekers.

We also partner with career centers, social service agencies, community and faith-based organizations, and educational institutions, to ensure robust outreach and recruitment, as well as to provide supportive services for participants.

- **Outreach and Recruitment**

We have assembled an extensive outreach and recruitment campaign to attract interest in our pre-apprenticeship program, which involves recruiting applicants through our core industry partners, and our vast network of over 500 Career Centers, adult basic education programs, municipal and poverty action agencies, community- and faith-based organizations, women's organizations, local elected and government officials and state and regional agencies.

Although we are a co-ed program, we have a goal of at least 50% women in each cohort and have found it valuable to feature diverse tradeswomen (past Building Pathways graduates) in our marketing and social media campaigns so that women career seekers can visualize themselves in our program and doing construction work.

We hold multiple orientation sessions prior to each training cycle to present information on apprenticeship, the industry, and our program requirements and components. In these sessions we honestly portray all of the potential challenges and advantages of this career path.

- **Application & Assessment**

We employ a 3-step application process to determine how ready a candidate is for our program and whether they are a good fit for an apprenticeship:

- Candidates must complete an application form which requests information about their educational background, prior work history, and interest in construction, among other topics. As part of the application, applicants must demonstrate satisfaction of certain baseline requirements that are set by our funders and/or are aligned with the requirements for entry into a building trades apprenticeship program. For example, they must be at least 18 years of age, have a high school diploma or equivalency credential, be authorized to work in the US, and have a driver's license, among others.
- Step 2 of the application process is Assessment Day which consists of the administration of baseline tests to see if applicants have the skills and aptitude necessary to complete the program including an adult basic aptitude test for math and reading, drug test, and a physical aptitude test (such as climbing a ladder, lifting and carrying construction materials).
- Successful candidates will move to the final step in the selection process which is an interview before a committee of employers and union representatives. The committee probes the candidates' interest in construction, occupational skills and experience, and work readiness. This

committee, in collaboration with the BPI team, makes the final selection of participants. The committee's initial endorsement of our participants can be beneficial when we refer our graduates to their apprenticeship programs.

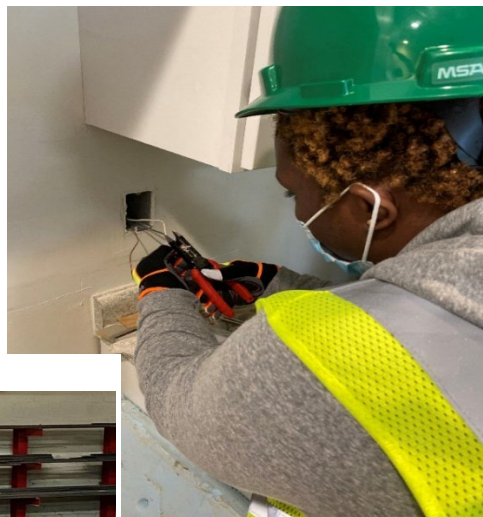
- **Employability and Occupational Skills Training**

Our pre-apprenticeship training curriculum emphasizes two key elements: entry-level occupational skills based on industry standards and job readiness skills.

– Skills, Competencies and Knowledge for Relevant Employment. The curriculum is designed to impart skills common for entry into all building trades apprenticeship programs, and is modeled on a curriculum developed by a national labor-management partnership of construction unions and employers. It includes job readiness (“soft skills”) training which allows participants to practice such essential skills as interviewing, teamwork, workplace problem-solving, effective communication, budgeting, working with diverse colleagues, as well as, other life skills. The Occupational Skills training includes sessions in the types and components of a construction project (both horizontal and vertical) and industry infrastructure, the apprenticeship model, workplace safety, construction math, construction tools, blueprint reading, labor history, workers’ rights, hoisting and rigging, work zone safety, hazardous waste, sustainable construction, respectful workplace, and trades exploration.

– Modeled on the Workplace for Career Readiness. We incorporate hands-on and experiential learning that simulates the construction work environment, and provide opportunities for participants to work together to solve problems during project-based activities. Through field trips to apprenticeship training centers and active job sites, as well as participation in community service projects, we allow participants to experience different facets of each trade so they can decide which type of work they are most interested in within the field. Our soft skills training mirrors the environment participants will encounter in the apprenticeship program and on the job. We set strict attendance, punctuality, dress code and conduct policies – and hold participants accountable for meeting these standards.

Our training is conducted by instructors who are skilled in the trades and other subject matter experts, to ensure that the training reflects actual job requirements.



Building Pathways in Action

- **Case Management**

The individuals we enroll may have financial, social, emotional and/or legal barriers to employment success. Through our services and community partnerships, we help them learn to manage these challenges so they can succeed. Ongoing support may also be needed to help some participants stay focused during the waiting period (if any) to enter a Registered Apprenticeship program, and to succeed in their apprenticeship.

Our case management coordinator develops an Individualized Service Plan with each participant at the beginning of their enrollment in the program to gauge the need for additional support and to set goals and develop specific career plans. When a need for a service beyond our resources or expertise is identified, referrals are made to an appropriate outside agency or service organization.

While we do not provide a training stipend, we do provide participants transportation stipends (either a fuel card or transit pass) and childcare assistance as reasonably needed and as funds allow, during the training portion of the program. We also provide work boots, safety vests, safety glasses, and gloves at no charge.

Building Pathways is a co-founder of the Care That Works (CTW) child care initiative that addresses access to child care for workers employed in or participating in training for, non-standard hour care occupations, such as the trades. CTW matches families needing early hour care with day care providers who have agreed to open their child care facilities as early as 5 or 5:50 am.

Our case management services are offered for at least the first year of participants' formal apprenticeship program when apprentices may be most vulnerable to dropping out of an apprenticeship. There are many ways we stay in touch with program graduates on a routine basis, including surveys, phone, text and email check-ins.

- **Career Coaching and Apprenticeship/Job Placement**

Our participants, guided by our instructors and staff, will determine which trade(s) is an appropriate fit based on their interest, mechanical aptitude, math skills, future career goals, etc. In most cases, the participant will have to apply to the respective apprenticeship program for that trade to initiate the placement process. Building Pathways assists each participant with the application process and advocates for acceptance into the program and if appropriate based on the trade, and with the cooperation with the local Business Manager and training coordinator, solicits employment opportunities with our employer partners and other signatory contractors for accepted graduates.

Recognizing that there may be idle times and 'waiting periods' for participants before they can enter an apprenticeship following graduation, we work with partners and community contacts to identify interim jobs where our graduates can gain valuable experience in the field while maintaining financial security.

- **Retention and Other Support**

We strive to maintain contact with our graduates through surveys, email, text, phone for at least 12 months following the initial placement. As necessary, we also engage with their employers and apprenticeship programs to address any barriers to success. We also host alumni events to promote continued engagement and peer support.

Because women and other diverse workers are often the victims of discrimination and/or harassment on the job which can lead to higher attrition, we have become the Massachusetts affiliate for delivery of ANEW's **RISE Up (Respect, Inclusion, Safety and Equity in the Construction Trades)**, a Respectful Workplace Program designed to

provide all workers and managers with the tools and support necessary to create and maintain a safe, inclusive and productive environment for everyone. The framework of the training is based on minimizing distractions and maximizing productivity.

2. Outreach and Guidance to Women

Recognizing that our training program cannot serve as the only pipeline for women and other diverse career seekers to access careers in the building trades, Building Pathways also seeks to raise general awareness about building trades apprenticeship opportunities through targeted outreach to women, particularly women of color, and to students and educators in area high schools, with a focus on urban and vocational high schools. These are careers that they might not ordinarily consider, either because they simply don't know about these opportunities or because they have been led in another direction due to societal pressure or stigma. Our goal is to inspire women and young adults to pursue a career in union construction as a viable path to equal pay for equal work, excellent benefits, and a better future.

- **Northeast Center for Tradeswomen's Equity Build A Life That Works– a pipeline to opportunity in the trades for women**



For women, the road to good jobs in the construction trades begins with the knowledge that the jobs and training are available. Building Pathways is also home to the **Northeast Center for Tradeswomen's Equity** program, which is dedicated to providing that knowledge.

Through our **Build A Life That Works** outreach campaign and career navigation services, we provide women with an insider's road map to finding and applying for trade union apprenticeship programs.

Our buildalifema.org website and social media outlets are a resource for learning about each of the trades and include trade videos and testimonials from active tradeswomen. The campaign also includes fence scrims, public transit ads, and brochures featuring tradeswomen to recognize that women are thriving in building trade careers, and **you can do it, too!**

Our signature Tradeswomen Tuesday open houses cover the basics of the apprenticeship application process, and invite tradeswomen to share their experiences in the industry with women career seekers. These information sessions (virtual during Covid), held at least monthly, attract 10 – 30 women career seekers.

As part of the pipeline outreach initiative, **NCTE** developed a tradeswomen speakers bureau, composed of apprentices and journeymen working in the union building trades who we engage regularly with news, updates, and opportunities to volunteer and connect. It also serves as a forum for tradeswomen leadership development. It's important for tradeswomen to take leadership in their own movement. Many of our activities give tradeswomen opportunities to practice their leadership skills. Members of the Speakers Bureau participate as panelists for Tradeswomen Tuesdays and other outreach events. In addition, **NCTE** holds regular meetings of the Tradeswomen Speakers Bureau, where tradeswomen can connect with one another. The Speaker's Bureau inspired the formation of the Boston Union Trades Sisters, now boasting 700 tradeswomen, who meet regularly for social events and use their Facebook page for both networking and to share tips and advice on navigating the construction industry.

[Tradeswomen Tuesday](#) information sessions and close follow up with career seekers who have the basic qualifications for construction apprenticeship, the Build A Life team points women toward doors that open careers as tradeswomen.

Data collection is a key component of our Pipeline project. We not only wish to introduce women to the prospect of working in union construction, and direct them toward entry points to these careers, but also keep track of where women are along their career journey, and track how many women get to work as union construction workers. Contact information for women career seekers attending our events or making email or website inquiries, is maintained in a Salesforce database. We use this database to send up-to-date information on pre-apprenticeship and apprenticeship recruitment, and to periodically survey career seekers about whether they have pursued an apprenticeship.

Since the launch of our campaign in 2017, 2600 women career seekers have been enrolled in our database, and over 100 have entered an apprenticeship based on self-reported survey responses. These numbers dispel the myth that women are not interested in careers in the trades.

- **Massachusetts Girls in Trades**



In the US, students may choose to attend a vocational high school that integrates academic and career technical education (CTE). Students in vocational high schools earn not only a high school diploma, but also an industry certification. Unlike Europe, US vocational education historically came with the stigma that only low-performing and troublemaking students end up in such schools. But career and technical education has changed a lot in recent years, and now offers a variety of technical programs from which to choose, while improving the delivery of the traditional construction trades-related programs.

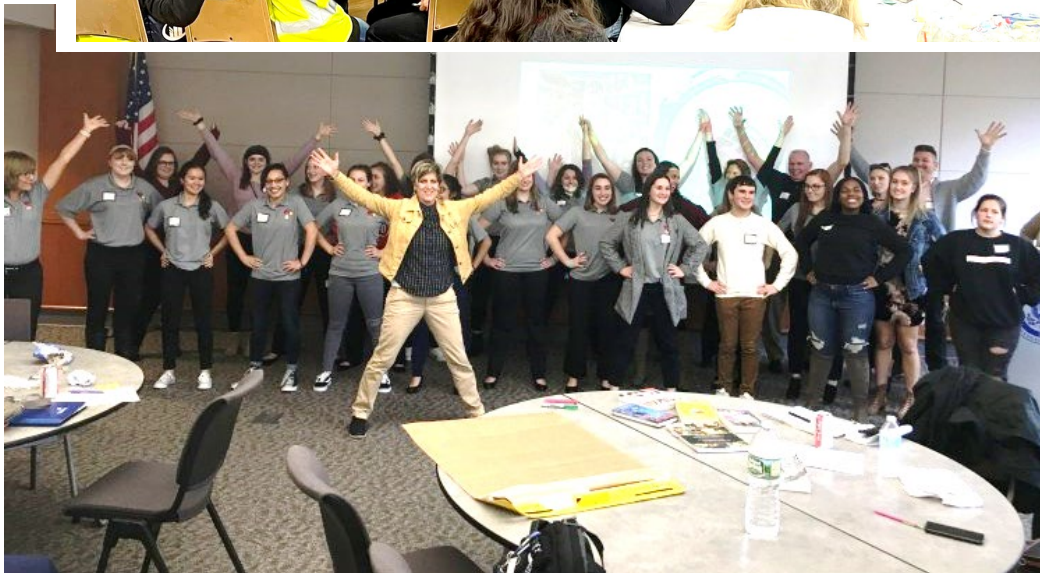
[Massachusetts Girls in Trades](#) (MA GIT) was launched in 2015 by a partnership of educational, governmental and union organizations with a shared goal of supporting and encouraging female CTE students and alumnae to pursue careers in the union building trades. The group's mission is to help female students in middle school and high school — as well as recent high school graduates — to learn about and start careers in high-paying, high-skilled careers in union construction trades. By promoting these options and truly opening up these careers for women, MA GIT has played a role in providing female students with equal opportunity. This will allow them to take advantage of the uptick in Massachusetts construction activity which is now seen throughout the Commonwealth.

The work of MA GIT is driven by three (3) essential questions:

- How can we promote and support young women currently enrolled in career and technical education to enter the union construction trades?
- How can we develop a pipeline into the construction trades for middle school girls who are enrolling in career and technical high schools?
- How can we reach graduates of career and technical high schools who may be looking for better opportunities and interested in careers in the union construction trades?

MA GIT sponsors annual conferences and career fairs attracting hundreds of students and educators to connect them with union apprenticeship programs and contractors, and with active tradeswomen who share their experiences working in the industry. MA GIT also hosts and participates in other academic workshops during the year to inform educators and guidance counselors about career opportunities in the building trades and the apprenticeship model.

MA GIT additionally sponsors Equity in the Trades Student Leadership Councils in over 15 CTE schools across the state. These student-led clubs provide peer support for students who are in non-traditional programs for their gender; participate in leadership workshops; and conduct outreach to middle school students, parents, and school committees, about the advantages and opportunities of enrolling in CTE programs.



Equity in the Trades Leadership Workshop

MA GIT can take at least partial credit for the significant increase in female CTE students in construction-related programs. In the 2021-22 school year, 21.1% of students in construction-related programs were female, compared to 14.6% in 2012-2013.



The PGTI Model



Integrating supply and demand for women in the construction industry

Despite several brief periods since the late 1970s of increased participation by women in construction apprenticeships, the percent of women working in the construction trades in the United States has been consistently stalled in the low single digits. Beginning in 2008, a collaboration of stakeholders across the construction industry in Massachusetts began meeting to address the problem of the persistent lack of access to good jobs for women in the construction trades. Originally convened by the Labor Resource Center (LRC) at the UMass Boston; the Boston Metropolitan District Building Trades Council, Building Pathways, Inc.; the New England Regional Council of Carpenters, the Dorchester/Roxbury Labor Committee and the Massachusetts AFL-CIO, this multi-stakeholder collaboration, known as PGTI: the Policy Group on Tradeswomen's Issues, has over 150 participants from business, labor, government and policy. It has met bi-monthly for since 2008 and is focused on and committed to improving outreach, recruitment, hiring, training, employment, and retention of tradeswomen in the Massachusetts construction industry.

Over the past twelve years, participating stakeholders have been engaged in developing, implementing and evaluating both a strategic framework and technical tools for increasing women's participation in the pipeline from recruitment into apprenticeship through the steady employment that is a precondition to a successful career in the construction.

The strategic framework, **the Integrated Supply and Demand Model**, provides a conceptual approach to the variety of barriers faced by women entering the industry and also by those stakeholders who seek to change entrenched ways of doing business that reinforce the exclusion of women. Challenges ranging across the various sectors of the construction industry include, but are not limited to:

- gender bias that affects women from recruitment to employment
- market forces which determine when and how many apprentices are trained by the Registered Apprentice Programs
- institutional gap between the Apprentice Programs which train and the employers who hire.

See Figure 1 for a schematic representation of the complex forces addressed by the **Integrated Supply and Demand Model**.

Among the technical tools developed by participating stakeholders is a set of area best practices titled [Finishing the Job: Best Practices for a Diverse Workforce in the Construction Industry](#), which have been implemented and evaluated across the state and have been shown to be effective in increasing women's opportunities and access to careers in the construction trades. [Finishing the Job](#) consists of a set of checklists customized to the needs of each stakeholder groups including construction owners, contractors, subcontractors, building trades unions, registered apprenticeship programs and community-based organizations that are working to diversify their local construction workforce.

These best practice checklists have now been adopted, as a whole or in part, on approximately \$7 billion worth of construction in Massachusetts, including the University of Massachusetts Building

PGTI's mantra: *We are in this together. There is no silver bullet.*

We will never never give up.

v.2 July 2020

Authority, Massachusetts Gaming Commission, the Division of Capital Asset Management and Maintenance, the Department of Transportation, the Boston Redevelopment Authority and the City of Boston.

As a result of this industry-wide collaboration and the implementation of the Integrated Supply and Demand Model's best practices, we have seen a steady rise in participation of women in Registered Apprenticeship Programs since 2012 (See Figure 2) and increased employment where the best practices have been implemented.

- The construction of the Integrated Sciences Complex at the University of Massachusetts Boston was the pilot site for the best practices from 2011-14 and was able to attain 10% women's work hours for the 24 months of the project.
- Working with the City of Boston, we have been able to track women's work hours under the city's jobs ordinance.
- The Mass Gaming Commission's (MGC) three completed projects in Plainville, Everett and Springfield each had 7% women's work hours.

FIGURE 2: AN INTEGRATED SUPPLY AND DEMAND MODEL FOR INCREASING WOMEN'S ACCESS TO GOOD JOBS IN THE CONSTRUCTION TRADES.

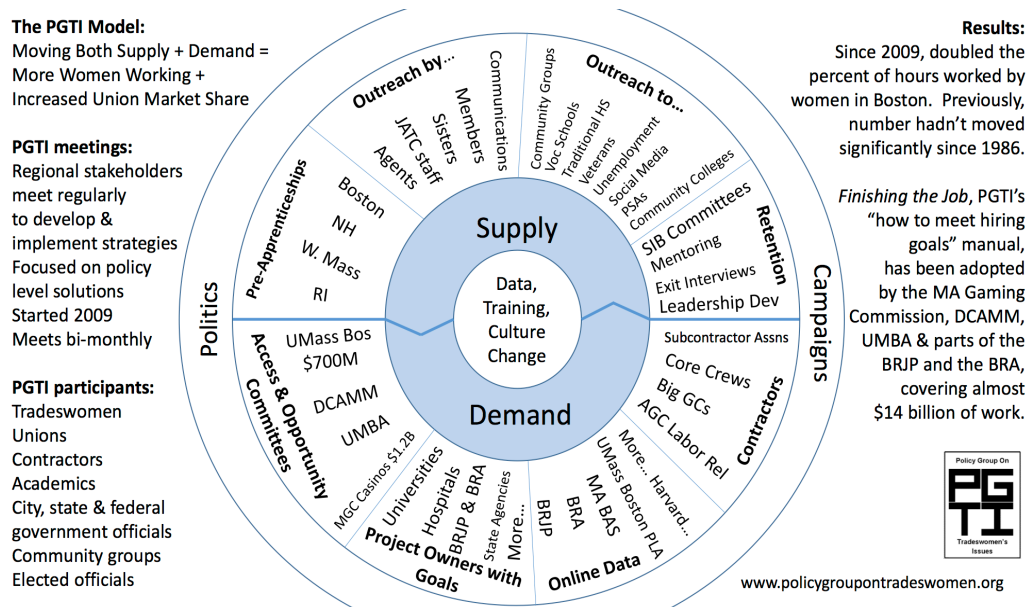
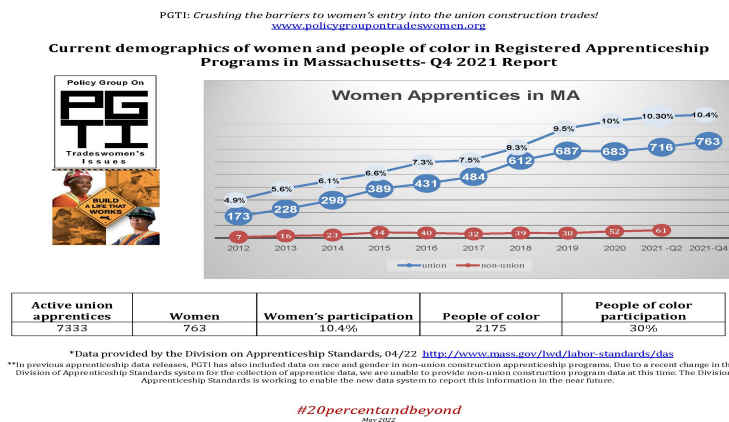


FIGURE 1: PERCENT OF WOMEN IN MASSACHUSETTS REGISTERED APPRENTICESHIP, 2012-2021.

Source: Massachusetts Division of Apprentice Standards, www.mass.gov/lwd/labor-standards/das/



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