

Apprenticeship Expansion in Massachusetts: Strategic Plan

June 2018

Compiled by the Executive Office of Labor and Workforce Development, in partnership with the Apprenticeship Advisory Group



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT

Letter from the Secretary



Dear partners,

Last July, the Executive Office of Labor and Workforce Development convened a group of enthusiastic stakeholders committed to developing a strategic plan to expand Registered Apprenticeship in the Commonwealth. It is my pleasure to now present this plan to you.

The plan demonstrates our commitment to diversifying the Registered Apprentice workforce and expanding apprenticeship to new occupations and industries. It is a roadmap for our implementation efforts. As a result of this work, our goal is for businesses to have a new, substantive talent solution, and for our jobseekers to have a new path towards financial self-sufficiency.

Thank you to everyone who put so much time and hard work into the development of this plan. I'm really looking forward to working with you on its implementation and helping our Commonwealth thrive.

Sincerely,

A handwritten signature in black ink, appearing to read "Rosalin Acosta".

Rosalin Acosta, Secretary of Labor and Workforce Development

I. Executive Summary

Massachusetts is at a critical juncture for the expansion of Registered Apprenticeship (RA). With the right capacity, structure, incentives, and expertise, the Commonwealth can transform our current RA expansion efforts in non-traditional industries from a set of pilots and grant-funded programs to an established, systemic approach to talent development, retention, and diversification of the apprenticeship pipeline.

The following Apprenticeship Expansion Plan represents an 8-month long stakeholder engagement process that culminated in a set of innovative recommendations:

1. **Define clear strategy, governance, and institutional infrastructure**
2. **Formalize apprenticeship recruitment pipeline**
3. **Articulate simple pathways and transferability**
4. **Build pipeline of employer partners**
5. **Streamline processes to launch, monitor, and discontinue apprenticeship programs**
6. **Articulate funding mechanisms**
7. **Establish consistent evaluation systems**

We look forward to working with our partners to execute these recommendations and make apprenticeship available to all.

II. Objectives, Vision, and Goal

The objective of the Apprenticeship Expansion Plan is to articulate a state-level approach to the expansion and diversification of Registered Apprenticeship across the Commonwealth of Massachusetts. Specifically, this Plan was created to meet the following objectives:

- a) Expand Registered Apprenticeship to new industries and occupations in order to meet employer demand throughout Massachusetts, and;
- b) Diversify the pool of apprentices within all industries in order to provide access to quality employment for all citizens of the Commonwealth.

VISION: Massachusetts will be home to a vibrant and diverse apprenticeship ecosystem. Our Commonwealth will have the nation's best apprenticeship programs that offer our businesses access to the most skilled and diverse workforce, and our jobseekers have access to the most flexible and comprehensive training options in the country. Massachusetts apprenticeship programs will drive Massachusetts to maintain its competitive, thriving, and innovative economy.

III. Process

In July 2017, Massachusetts Secretary of Labor and Workforce Development, Rosalin Acosta, first convened the Apprenticeship Advisory Group in order to inform the development of a strategic plan for expansion of Registered Apprenticeships in Massachusetts. The

Apprenticeship Advisory Group included representatives from union and non-union organizations and employers, community-based organizations, educational institutions, legislators, the public workforce development system, government agencies, and other key stakeholders (full membership list in Appendix). This group convened 3 more times in the nine months following the initial meeting.

The Executive Office of Labor and Workforce Development also partnered with several industry organizations in order to convene roundtables and gather feedback from the business community. Businesses were convened by the Associated Industries of Massachusetts, Greater Boston Chamber of Commerce, Massachusetts Technology Leadership Council, and the Employer Association of New England. Individual conversations were also held with employers from the healthcare, technology, and manufacturing sectors.

The input of these stakeholders, along with extensive research conducted by the Executive Office of Labor and Workforce Development and its partners, is reflected in the development of this document. EOLWD and the Administration are committed to implementing this Strategic Plan to diversify and expand apprenticeship in Massachusetts.

IV. | History of Registered Apprenticeship

Registered Apprenticeship is a training and employment structure that produces highly skilled workers to meet the demands of employers competing in a global economy. RA ensures authentic, applied learning by combining on-the-job learning with theoretical and practical classroom instruction to prepare exceptional workers.

Wisconsin created the first state Registered Apprenticeship (RA) system in 1911. In 1937 Congress enacted the National Apprenticeship Act (also known as the Fitzgerald Act), which was passed “to enable the [U.S.] Department of Labor to formulate and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices and to cooperate with the States in the promotion of such standard”. Following the passage of the Act, RA programs were utilized mainly in construction and utilities industries. Occupations in these industries, considered traditional occupations, were professionalized by RA in that training curricula was developed to industry standards and on the job learning was structured to support and reinforce the skills obtained during training, essentially standardizing each occupation. Following World War II, RA expanded into training firefighters, police, emergency medical technicians, and other health and safety workers. The apprenticeship grant funds issued by the U.S. DOL in recent years are intended to expand RA even further into new and non-traditional industries, those outside of construction and trade, and to underrepresented populations; transferring the success of RA models in construction and trade to new industries, such as Information Technology, Manufacturing, and Healthcare.

RA programs include 5 basic components:

1. Employment – Apprentices are employees from the onset and are paid wages from the beginning of their programs.

2. Classroom learning/Related Technical Instruction (approximately 150 hours per year*)
3. On the Job Training/Mentoring (Approximately 2,000 hours per year*)
4. Reward for Skills Gain – increased wages aligned with attainment of skills
5. National Occupational Credential

*New models allow hours to be waived for demonstration of competency.

The federal Office of Apprenticeship (OA) works in conjunction with independent State Apprenticeship Agencies (SAAs) to administer the program nationally. These agencies are responsible for:

- Registering apprenticeship programs that meet Federal and State standards
- Protecting the safety and welfare of apprentices
- Issuing nationally recognized and portable Certificates of Completion to apprentices
- Promoting the development of new programs through marketing and technical assistance
- Assuring that all programs provide high quality training
- Assuring that all programs produce skilled competent workers

Massachusetts has a State Apprenticeship Agency, the Division of Apprentice Standards (DAS), housed under the Department of Labor Standards. DAS approves new apprenticeship programs and monitors existing program compliance. The Massachusetts Department of Career Services (DCS) works with DAS to administer apprenticeship grant funds and launch new apprenticeship programs. The Apprenticeship Advisory Council, a broad group of approximately 50 stakeholders, was created and convened in summer 2017 to inform the development of this plan.

In 2015, the United States Department of Labor (USDOL) awarded \$175 million in American Apprenticeship Grants to 46 public-private partnerships, marrying the efforts of employers, organized labor, non-profits, local governments, and educational institutions to expand high-quality apprenticeships. The winning grantees in the American Apprenticeship Initiative (AAI) have pledged to train and hire more than 34,000 new apprentices across the country in high-growth and high-tech industries including health care, IT and advanced manufacturing in the five years following the grant awards.

USDOL has continued to support expansion of Registered Apprenticeship (RA) in traditional and non-traditional industries. An Executive Order issued on June 15, 2017 declares it is a policy of the Federal Government to provide more affordable pathways to secure, high paying jobs by promoting apprenticeships and effective workforce development programs, while easing the regulatory burden on such programs and reducing or eliminating taxpayer support for ineffective workforce development programs. Following the Executive Order, a Task Force on Apprenticeship Expansion was developed and tasked with addressing Federal initiatives to promote apprenticeships, Administrative and legislative reforms that would facilitate the formation and success of apprenticeship programs, the most effective strategies for creating industry-recognized apprenticeships, and the most effective strategies for amplifying and encouraging private-sector initiatives to promote apprenticeships.

As of March 2018, there are 9502 Registered Apprentices in Massachusetts. The majority of Registered Apprenticeships in Massachusetts – 89% - are in construction or building trade occupations. Public safety occupations make up another 6%, dispensing opticians 4%, and line

erectors 1%. Less than 1% of the Commonwealth's RA programs are for new occupations such as diesel and auto/truck mechanics, housekeepers, machinists, counselors and healthcare occupations.

The majority of Apprentices in Massachusetts are white and male. Only 9% of Registered Apprentices are female; 10% are Black; 8% are Hispanic/Latino; 1.5% are Asian-American/Pacific Islander; 2% have a disability; 9% are Veterans.¹

V. | Motivations for Massachusetts

Several motivations converged to drive EOLWD to establish the Apprenticeship Advisory Group – healthy, robust participation from a variety of stakeholders demonstrates that apprenticeship is of strong interest to many constituencies. What motivated such a broad group of advocates to begin this process?

Apprenticeship can make Massachusetts even more competitive. Availability of talent is a key determinant of any State's competitive position, and Massachusetts is well known for its educated workforce. A robust, best-in-class apprenticeship infrastructure gives Massachusetts a competitive edge in attracting and retaining employers.

Apprenticeships offer viable educational and career options for students and jobseekers. Apprenticeships provide an employment-based educational and career path that supports the individual financially. Post-secondary educational options are often expensive, not always aligned to employer needs, and do not guarantee employment.

Apprenticeships create a new talent pipeline for employers. Businesses across industries in Massachusetts struggle to attract needed talent. Specifically, employers often cite misalignment between skills acquired at educational institutions and skills employers need as a contributing factor to the insufficient pool of work-ready applicants. Apprenticeship addresses the issue by creating a flexible recruitment pipeline and allowing employers and industry to drive the training agenda, thus shifting the locus of control from the training provider to the employer.

VI. | Goals

The total number of Registered Apprentices in Massachusetts as of March 2018 is 9502. The following growth goals were determined based on evaluations of current demographics in Massachusetts and other states' reasonable progress towards industry and demographic diversification.

Diversification of apprenticeship

Diversification goals are based on percentages rather than total counts. Given the cyclical nature of construction in particular, the total amount of apprentices may vary, but our goal is to

¹ Massachusetts Division of Apprentice Standards, March 2018.

ensure that the total percent of underrepresented demographic groups continues to increase towards parity.

	2018	2020	2022	2024	2026	2028
Women	846 / 8.9%	12%	15%	18%	21%	24%
Black/African-American	895 / 9.42%	<i>Cities and towns across Massachusetts have significant variance in percentages of Black/African American, Hispanic/Latino, and Asian-American/Pacific Islander residents, thus a statewide goal may be misleading. For example, while 8.1% of Massachusetts identifies as Black/African-American, an estimated 28% of Boston is Black/African-American. One of the action items in Year 1 will be to determine more regionally specific representation goals.</i>				
Hispanic/Latino	827 / 8.7%					
Asian-American/Pacific Islander	157 / .7%					

Apprentices served in target industries

	2018	2020	2022*	2024	2026
Target Industries: Healthcare, Tech, and Manufacturing	26 / .2%	200	600	1000	1400

*Through the USDOL Apprenticeship Expansion Funding Application, the state has committed to a goal of increasing the total amount of apprentices in Massachusetts by 816 by 2022. Our goal is to ensure that 600 of those new apprentices are in target industries.

VII. | Analysis of strengths, weaknesses, opportunities, and threats

The Executive Office of Labor and Workforce Development engaged the Apprenticeship Advisory Group and outside research to develop a comprehensive analysis regarding the strengths, weaknesses, opportunities, and threats that would be most relevant to consider during expansion efforts.

A. Strengths: What internal factors currently contribute to a successful outcome?

- 1) **Availability of best practices.** Massachusetts has a strong tradition of Registered Apprenticeship in the building trades, and has pioneered several innovative approaches to pre-apprenticeship, diversifying the apprenticeship workforce, and expanding to new industries. Several examples of innovative models include, but are not limited to the following:
 - **RA Program design with workforce boards/intermediaries as sponsors:** Hampden County Regional Employment Board (HCREB) and North Shore Workforce Investment Board (NSWIB), the lead operators on the Massachusetts EOLWD/DCS, DOL funded apprenticeship grants,

worked with DAS who approved each as an apprenticeship program sponsor. This innovative approach affords employers interested in RA the option to have an intermediary sponsor their program, an option that can reduce the administrative burden and the benefit of collaborating with an organization with RA knowledge and familiarity that the employer may not have.

- **Manufacturing:** the Manufacturing Advancement Center Workforce Innovation Collaborative (MACWIC) and the Massachusetts Manufacturing Extension Partnership (MassMEP), based in Worcester, MA; both offer technical assistance to employers on how to implement apprenticeship. NAMC, a collaborative of Workforce Boards from Metro North, Metro SouthWest, North Shore, and Merrimack Valley, also offers technical assistance to manufacturing employers in the region.
- **Hospitality:** BEST Hospitality Training, a labor-management training partnership based in Boston, MA, offers both pre-apprenticeship and incumbent worker training.
- **Diversifying Construction:** Building Pathways, a non-profit, provides a gateway for low-income Boston area residents, particularly in under-served communities, to access family-sustaining careers in the construction industry through apprenticeship preparedness training and advocacy. The Policy Group on Tradeswomen’s Issues has championed efforts to increase the number of women in construction to 20% by 2020.

- 2) **Return on investment.** The return on investment for businesses, individuals, and government is high. Individual apprentices have a \$240,000+ lifetime earning advantage in salary compared to non-participants, adjusting for differences in pre-enrollment earnings and demographic characteristics.² In Canada, for every dollar an employer spends on apprenticeship, employers get an average of \$1.47 back in increased productivity, and 97% of participating employers recommend RA programs. Furthermore, the Canadian government reaps \$28 in economic activity for every \$1 invested.³ In 2016, a study by the Department of Commerce and Case Western University found that apprenticeship creates value for companies in areas of production, where companies gain the value of output by apprentices and graduates, plus a reduction in errors; workforce, where companies reduce turnover and improve recruitment; and soft skills, where employees are more engaged, have better problem-solving ability, are more flexible to perform a variety of tasks, and reduce the need for supervision.⁴

² Mathematica Policy Research, “An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States,” Department of Labor (2012).

³ R.A. Malatest & Associates Ltd., “Apprenticeship – Building a Skilled Workforce for a Strong Bottom Line Return on Apprenticeship Training Investment for Employers: Phase II – A Study of 16 Trades,” Canadian Apprenticeship Forum (2009).

⁴ Economics and Statistics Administration and Case Western Reserve University, “The Benefits and Costs of Apprenticeships: A Business Perspective,” Department of Commerce (2016).

- 3) **Existing capacity and interest to leverage expansion efforts.** Massachusetts educational institutions have capacity and interest to support Related Technical Instruction (RTI). Across the State, 10 community colleges are members of the Registered Apprenticeship College Consortium, a national USDOL network of colleges and Registered Apprenticeship Programs working to provide college-to-career opportunities (Bunker Hill, Cape Cod, Greenfield, Holyoke, Middlesex, Mount Wachusett, Northern Essex, North Shore, Roxbury, and Springfield Community Colleges). Furthermore, UMass and State Universities have the capacity to link higher education to Registered Apprenticeship programs statewide. Higher education can access the GI Bill to create a funding mechanism for Veteran apprentices, and Pell and MassGrants are an option for RTI for low-income students. and WIOA and Trade Assistance funding can support RTI for adult workers, including in an educational institution.

The workforce development community, including the Executive Office of Labor and Workforce Development/Department of Career Services, Department of Labor Standards and its Division of Apprentice Standards, Workforce Boards and Career Centers, is actively interested in expanding apprenticeship as a workforce development strategy across the State. Additionally, with these dollars EOLWD/DCS is managing three grants to expand apprenticeship across the State; these grants have created funding opportunities for apprenticeships in manufacturing, healthcare, culinary, and human services industries, and are working to increase representation of women and minorities in apprenticeship.

Finally, Massachusetts has a State Apprenticeship Agency, which allows for more agile and flexible approval processes locally. Changes in rules and regulations or approvals for work processes do not need to go through the federal Department of Labor, which allows apprenticeship models to nimbly adjust to the needs of employers.

B. Weaknesses: What internal factors currently detract from a successful outcome?

1. **Lack of established infrastructure for expansion efforts.** Although the public workforce system and public education systems are willing and interested in promoting and supporting the Registered Apprenticeships, both often face a lack of funding, staff capacity, and expertise to do so. Specifically, front-line staff in the public workforce and/or public education systems are often limited in their understanding and/or capacity to promote and support apprenticeship.

The role of the sponsor is critical to the success of any apprenticeship program, but Massachusetts lacks any state-wide entity or non-profit with the capacity to act as a sponsor/intermediary between business, DAS, training providers, and students, especially for new industries and occupations.

2. **Recruitment for apprenticeship programs is not standardized.** In focus groups, employers consistently stated that one of the largest values of an apprenticeship program is the potential for a new recruitment pipeline that would solve for talent gaps. But the recruitment pipeline for apprenticeship programs is not consistently defined. While pre-apprenticeship programs exist, they are not always standardized across different providers, do not always provide facilitated entry into a full registered apprenticeship program, and approval standards are tailored towards building trades rather than other industries. In sum, there is no central pool from which an employer can access talent.
3. **No sustainable funding stream for infrastructure or training.** Training costs associated with apprenticeship, traditionally paid for by contributions from employers and employees in a unionized construction setting, need to be absorbed by an employer or other funding stream in a non-union environment. As apprenticeship expands to be a workforce development initiative rather than a compliance initiative, agencies and organizations administering the program may require expansion and/or reorganization. Some private foundations may also be interested in funding a pilot program, though they are unlikely to provide sustaining funding, although this risks making apprenticeship another program rather than a systemic response to a problem.
4. **Employers and jobseekers are either unfamiliar with apprenticeship or have perceptions that hinder expansion.** Messaging surrounding benefits, structure, and ease of apprenticeship implementation has not been formulated or deployed consistently to potential employers or apprenticeship partners. For employers in new industries, many perceive or experience apprenticeship as confusing and/or burdened with bureaucracy and paperwork. In many cases, the bureaucratic nature of apprenticeships is counterintuitive to their current lean practices and provides a disincentive to participate in the concept. Furthermore, for most employers, it is difficult to justify the overhead of setting up an Apprenticeship program without adequate programmatic or staff support from the State or local partners.

There is also a perception that RA is suited to jobs requiring less than a Bachelor's Degree, "blue collar" jobs, or only union jobs, which hinders expansion to new industries and occupations.

5. **Scale and cohesion.** The current programs around RA are scattered and disconnected (both strategically and operationally). This makes it very difficult for the key participants in Apprenticeships (employers and jobseekers) to engage with the apprenticeship systems since they carry the burden of finding a program (if it exists) that could serve their needs.

C. Opportunities: What external factors can we capitalize on?

1. **Strong government buy-in.** Apprenticeship has strong, bi-partisan buy-in across federal and state levels. At the state level, apprenticeship is strongly supported by the Baker Administration and the Joint Chairs of the Labor and Workforce Development Committee.
2. **Low unemployment rate.** With a low unemployment rate, the talent pool is tight and employers struggle to find skilled or available talent to meet their needs. Thus, employers are more likely to try new and innovative talent development approaches
3. **Existing funding sources could support related instruction.** A number of existing funding sources could potentially support apprenticeship, although not in a dedicated or sustained manner.
 - a. The **Workforce Innovation and Opportunity Act** allows for flexible funding opportunities that could fund apprenticeship (Individual Training Accounts and On the Job Training vouchers). Identify the policies and supports that need to be in place to help an individual tap into these resources for related-instruction costs.
 - b. The **Workforce Training Fund**, funded by a fee paid by employers, can be used to train incumbent workers through grants that go directly to employers. EOLWD will explore the ability to work with employers and the WTFP Advisory Board to apply for WTFP grants in ways that can support RA models.
 - c. **Competitive federal grants.** Massachusetts has received two federal grants to support apprenticeship expansion. The recent federal Executive Order expanding apprenticeship may yield additional expansion funding.
 - d. **Trade and Globalization Adjustment Assistance Act (TGAAA).** In 2009, the new Act added a specific reference to apprenticeships as an approvable method of training under TAA. Although apprenticeship had always been approvable under TAA, the specific reference was added to re-emphasize the relationship and correlation between apprenticeship and TAA.
4. **Leveraged relationships.** The State has leverage when hiring contractors. In other circumstances, this leverage has been used to mandate regional or minority hiring goals.
5. **Marquee employers.** The state has a number of large employers that could sponsor pilot programs. Many of these employers partner with the State for other initiatives, a relationship that can be leveraged in expansion discussions.
6. **Expansion of competency-based models.** Competency-based models, now more common in Registered Apprenticeship, are desired by a number of companies (i.e. manufacturing firms) and make RA more flexible and adaptive.

7. **Willing audience of practitioners.** Massachusetts has a willing audience of practitioners who would benefit from participating in Technical Assistance or a Community of Practice. Practitioners may include staff members with direct contact with business (Business Service Representatives at Career Centers, Workforce Board staff, etc.) and staff that work with students (vocational program directors, guidance counselors, CBO staff, etc.).
8. **Potential sponsors.** A number of industry associations exist in Massachusetts, which creates potential to organize across industry-specific employers and/or engage associations as sponsors. Training providers have also displayed interest in playing the role of the sponsor.

D. Threats: What external factors could jeopardize our work?

1. **Funding for related instruction is unstable.** Federal funding for Registered Apprenticeship is unstable; it is unclear if American Apprenticeship Grants will continue, and/or what level of funding will be available. On a state level, the Commonwealth of Massachusetts does not currently have recurring funding streams dedicated towards apprenticeship. In Governor Baker's FY19 budget, funds have been proposed to support this initiative, specifically expansion into new industries and diversification of the pipeline.
2. **Employer investment in training has declined.** In general, employer investment in worker training has declined significantly since the 1990s. In 2008, 11.2% of workers received employer-paid training; in 1996, it was 19.4%. The number of workers receiving on the job training has also declined significantly, from 13.1% in 1996 to 8.4% in 2008.⁵
3. **Lack of employer infrastructure to implement.** Many employers lack the capacity to administer aspects of Registered Apprenticeship, including related instruction and/or on the job training, at the workplace. This is particularly challenging for employers whose industries are not organized around employee training and investment. Small businesses are at a particular disadvantage when trying to implement apprenticeship, and they are the majority of businesses in Massachusetts.
4. **Fear of losing a trained apprentice.** Employers may fear that if they invest in training an employee, that employee will then have the advanced skills and capital to move to a competitor.

⁵ The White House of President of Barack Obama, "2015 Economic Report of the President," Report, February 2015, page 147, Accessed March 20th, 2017. Available at: <https://obamawhitehouse.archives.gov/administration/eop/cea/economic-report-of-the-President/2015>

5. **Inconsistent application of research.** Although some research demonstrating ROI (cited in this report) exists, research is not extensive enough or well-marketed enough towards employers.

VIII. | Recommendations for successful expansion of Registered Apprenticeship

The Apprenticeship Expansion Initiative has generated the following recommendations.

1. | **Define clear strategy, governance, and institutional infrastructure**
2. | **Formalize apprenticeship recruitment pipeline**
3. | **Articulate simple pathways and transferability**
4. | **Build pipeline of employer partners**
5. | **Streamline processes to launch, monitor, and discontinue apprenticeship programs**
6. | **Articulate funding mechanisms**
7. | **Establish consistent evaluation systems**

Detail of Recommendations

1. | **Define clear strategy, governance, and institutional infrastructure**

- a. **Establish internal capacity and strategy to meet goals.** The structure needed to execute the goals of this strategic plan is not currently in place at the state level. EOLWD is in the process of conducting an analysis of the required capacity and functional design of a team that would meet our goals is a critical activity.

2. | **Formalize apprenticeship recruitment pipeline**

- a. **Review and align existing pre-apprenticeship standards and programs.** Existing pre-apprenticeship program standards were designed for building trades. With industry expansion on the horizon, program standards must be updated for new industries participating in apprenticeship programs. Furthermore, a number of programs in schools and at other program providers in Massachusetts either identify as pre-apprenticeship and have not been approved as such, or could identify as pre-apprenticeship programs with a few changes to meet standards. Identification and formalization of these programs is critical to increasing the size and diversity of the apprenticeship pool of talent.
- b. **Train front-line staff to recruit pre-apprentices and apprentices, with a focus on traditionally underrepresented candidates.** Apprenticeship is often not part of the “suite” of options presented to jobseekers and students when considering post-secondary pathways or career opportunities. Thus, it is critical to ensure that staff across educational and workforce system are aware of apprenticeship as a route towards stable career pathways. Training should target vocational directors, guidance counselors, teachers, front-line program staff in

community-based organizations, career center staff, career guidance staff at community colleges, and others. To support advocacy for apprenticeship, marketing materials should be developed for front-line staff to use.

- c. **Develop a comprehensive database of pre-apprenticeship pipeline programs and apprenticeship programs/work processes.** As front-line staff increase job-seeker interest in apprenticeship, they will need a list of established pre-apprenticeship and apprenticeship programs for referral.

3. | **Articulate simple pathways and transferability**

- a. **Create a template of articulation agreements between public higher-education and new industry apprenticeships.** In order to increase capacity of public higher education institutions to provide related instruction, templates should be created to easily replicate industry apprenticeships from one employer to another.
- b. **Articulate public education funding options for students.** Align apprenticeship programs to credentials to qualify for Pell funding, and leverage GI Bill funding for eligible Veterans.
- c. **Create work processes that ensure apprenticeships lead to Certificate or Associate's Degree.** Apprenticeships (like other post-secondary educational paths) should be structured as a pathway that can lead to multiple career outcomes. As a result, apprenticeship programs should be structured so that they lead to a Certificate or an Associate's Degree. Naturally this will require some oversight to ensure the quality of the offered apprenticeship programs. Aligning to industry-recognized credentials incentivizes student and employer participation.

4. | **Build pipeline of employer partners**

- a. **Target employers to become “first-movers”.** Identifying a set of “first-mover” employers to adopt an Apprenticeship program in our target industries will incentivize other employers to follow suit. Ideally, a first-mover employer will start an apprenticeship program in an occupation that is high-need among other industry employers, making the program easy to replicate. Once first-movers are identified, the State will provide strong public support.
- b. **Create sponsor networks for new, non-traditional apprenticeship industries and smaller employers.** The sponsor role is critical to the success of an Apprenticeship program. It is critical to develop new sponsor capacity among industry groups, workforce boards, and training providers.
- c. **Train employer-facing staff in education, workforce, and economic-development to refer potential employer partners to apprenticeship programs.** Employer-facing staff are partners in efforts to expand awareness of apprenticeship in the business community. Although these staff would not be

responsible for program development, they will connect to a point person who will assist in the development of new apprenticeship programs.

- d. **Evaluate how to leverage Commonwealth contracts to encourage employers to develop Registered Apprenticeship programs.** The Commonwealth should evaluate its ability to encourage staffing/hiring behaviors among contractors.

5. Streamline processes to launch, monitor, and discontinue apprenticeship programs

- a. **Maximize staff capacity to design, develop, and monitor apprenticeship programs, and coach employers.** Staff internal to EOLWD agencies and partner organizations need expanded capacity to launch and develop industry-specific programs for employers and provide ongoing coaching to committed employers. Expanded capacity can be realized by way of an increased FTE count, contractor, or partnering with other organizations.
- b. **Develop regionalized “apprenticeship packages” for employers in target industries.** Targeting industries of healthcare, manufacturing, and tech require regionalized “apprenticeship packages” that simplify implementation of an apprenticeship program. Apprenticeship packages include a list of resources including choice of training providers, a work process, and potential talent pipelines, at a minimum.
- c. **Provide initial and on-going coaching to employers and sponsors that are managing an apprenticeship program.** New sponsors will require on-going coaching from State staff and existing sponsors to learn how to maximize value for employers and jobseekers. Similarly, employers will need ongoing coaching from either the sponsor or the State to manage any challenges and adjust their apprenticeship program as needed.
- d. **Provide a one-stop web-based apprenticeship resource for employers (including “apprenticeship packages”, compliance reporting, wage information and guidelines, management of relationships with educational suppliers, access to recruiting pipeline, management of funding mechanisms, etc.).** In order to maximize reach, it is necessary to develop a web presence for employers and sponsors in new industries looking to launch a Registered Apprenticeship Program. The website provides should also provide resources that an employer or sponsor can access throughout the course of the program.

6. Articulate funding mechanisms

- a. **Dedicate public funding towards expanding capacity to launch and manage apprenticeships.** For the first time, Governor Baker’s FY19 budget has included \$700,000 dedicated to expanding Registered Apprenticeship into new industries and occupations and diversifying the existing apprenticeship pipeline.

- b. Identify and articulate sources of funding for students and employers.**
Students may have access to Pell funding or other grant funds; employers may utilize grant funds, On the Job Training funds, and other options to fund apprenticeships. These options must be articulated and made easy to access for employers and potential apprentices.

7. | Establish consistent evaluation systems

- a. Develop centralized data system to track outcomes and ROI for employers, and report outcomes.** Employers currently report data into the Division of Apprentice Standards, but there are opportunities to optimize the type of data reported, link participation data to wage records to track long-term outcomes, and establish a mechanism to publish Massachusetts-specific ROI for employers.

IX. | Actions for Year I

Year 1 is dedicated to designing the long-term system and launching pilot initiatives.

- 1. Define clear strategy & governance and institutional infrastructure**
 - a. Evaluate Apprenticeship expansion capacity under a cross-department leadership framework that provides an ability to act in a coordinated way in the short-term
 - b. Develop detailed 4-year implementation plan with clear goals and milestones
 - c. Establish high-profile advisory council with heavy industry participation
- 2. Formalize apprenticeship recruitment pipeline**
 - a. Identify ~20 feeder programs/institutions for pilot programs
 - b. Re-evaluate existing pre-apprenticeship approval standards and redesign as necessary
 - c. Consider utilizing FY19 funding to establish and fund new pre-apprenticeship program(s).
 - d. Develop detailed 4 year plan around the recruitment portion of implementation plan
- 3. Articulate simple pathways and transferability**
 - a. Conduct outreach to post-secondary institutions to encourage alignment with Registered Apprenticeship and RTI
 - b. Develop list of accessible funding options for related instruction for students
 - c. Identify 3-4 work processes for pilot adoption that can culminate in a Certificate or Associate's Degree
- 4. Build pipeline of employer partners**
 - a. Identify 1-2 employer associations or other industry-specific groups to act as industry-specific sponsors

- b. Identify 5-10 employers that can participate in an industry-specific apprenticeship program pilot in spring of 2019
- 5. **Streamline processes to launch, monitor, and discontinue apprenticeship programs**
 - a. Define ~5 new apprenticeship programs (work process and potential regional partners) in target industries/occupations.
 - b. Create “manual” support to employers to free employers of any material administrative burdens and ensure “seamless” process for participation in pilot
- 6. **Articulate funding mechanisms**
 - a. Develop 4-year budget and funding plan for infrastructure
 - b. Identify all potential sources of funding for related instruction and aggregate
- 7. **Establish consistent evaluation systems**
 - a. Evaluate existing reporting system for upgrades

X. | **Conclusions**

We are grateful to our industry, education, non-profit, government, labor, workforce, and other strategic partners who have put significant time and thought into the production of this plan. These partnerships will be critical as we begin implementation, and we look forward to continued ongoing engagement as we move forward towards our vision of making Massachusetts home to a vibrant and diverse apprenticeship ecosystem.

X. | Organizations Represented in Apprenticeship Advisory Group

Associated Builders and Contractors
Associated Industries of Massachusetts
BEST Hospitality Training
Boston Private Industry Council
Building Pathways
Bunker Hill Community College
Central Massachusetts Workforce Investment Board
Coghlin Electric
Commonwealth Corporation
Consul General of Germany to the New England States
Department of Career Services
Department of Elementary and Secondary Education
Department of Higher Education
Department of Labor Standards
Executive Office of Education
Executive Office of Housing and Economic Development
Executive Office of Labor and Workforce Development
Greater Lawrence Technical School
Hampden Regional Employment Board
Holyoke Community College
In Order Business Development Solutions
Jobs for the Future
Massachusetts Business Roundtable
Massachusetts Community Colleges Executive Office
Massachusetts Gaming Commission
Office of Senator Jason Lewis
Office of Representative Paul Brodeur
Office of Representative Keiko Orrall
Office of Representative Joseph McKenna
Massachusetts Department of Transportation
Massachusetts Manufacturing Extension Partnership
Mayor's Office of Workforce Development, City of Boston
MGM Springfield
National Federation of Independent Businesses
New England Regional Council of Carpenters
North Shore Workforce Investment Board

Northeast Advanced Manufacturing Consortium (Merrimack Valley, Greater Lowell, MetroNorth and North Shore Workforce Boards)

Old Colony Regional Vocational Technical School

Partners for Community

Sheet Metal Workers Training Center

SkillWorks

Springfield Electrical JATC

University of Massachusetts Amherst

United States Department of Labor, Women's Bureau

Wentworth Institute of Technology