



Interim Report of the
Apprenticeship 2030 Commission

Annapolis, Maryland
January 2024

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Apprenticeship 2030 Commission

January 2024

The Honorable Wes Moore, Governor
The Honorable Bill Ferguson, President of the Senate
The Honorable Adrienne A. Jones, Speaker of the House

Dear Governor Moore, President Ferguson, and Speaker Jones:

The Apprenticeship 2030 Commission is pleased to submit this report and recommendations as required by Chapter 168 (Senate Bill 104) of 2023. The purpose of the commission is to examine and make recommendations to reduce skill shortages in high-demand occupations and provide affordable training for career pathways for young people by:

- expanding registered apprenticeships in industry sectors with skill shortages;
- growing the number of registered apprenticeships to at least 60,000 by 2030; and
- reaching the Blueprint for Maryland's Future goal for 45% of high school graduates completing the high school level of a registered apprenticeship.

We wish to thank the commission members, the commission staff, and the many individuals who briefed the commission at our meetings. This is the 2023 interim report of the commission.

Sincerely,



Jacob Hsu
Chair

JH/DAS/msr

Apprenticeship 2030 Commission 2023 Membership

Jacob Hsu, Chair

Senators

Malcolm Augustine
Mary Beth Carozza
Arthur Ellis
Jim Rosapepe

Delegates

Marlon Amprey
Carl Anderton, Jr.
Eric Ebersole
Chao Wu

Nonlegislative Members

Greg Akerman
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Brian Cavey
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Donna S. Edwards
Terry Forde
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Contents

Transmittal Letter.....	iii
Roster	v
Interim Report of the Apprenticeship 2030 Commission	1
Introduction.....	1
What Is Apprenticeship.....	2
State of Apprenticeship.....	2
Apprenticeship in Maryland	4
Overview of Commission Meetings	5
September 5 Meeting	5
October 3 Meeting	6
Apprenticeship 2030 Commission Workgroups.....	6
November 8 Meeting	6
Recommendations and Conclusions	7
Activating Employer Demand	8
Developing an Interoperable Education and Apprenticeship Ecosystem.....	9
Removing Barriers by Focusing on Outcomes Not Outputs	9
Category 1 – Administrative Actions	10
Category 2 – Further Commission Study to Shape Legislative or Administrative Actions....	14
Appendix 1. List of Acronyms.....	19
Appendix 2. Chapter 168 of 2023 – Senate Bill 104	20
Appendix 3. Commission Member Comments.....	27

Interim Report of the Apprenticeship 2030 Commission

Introduction

Chapter 168 (Senate Bill 104) of 2023 established the Apprenticeship 2030 Commission. The purpose of the commission is to examine and make recommendations to reduce skill shortages in high-demand occupations and provide affordable training for career pathways for young people by:

- expanding registered apprenticeships in industry sectors with skill shortages;
- growing the number of registered apprentices to at least 60,000 by 2030; and
- reaching the Blueprint for Maryland's Future goal for 45% of high school graduates completing the high school level of a registered apprenticeship.

The commission's focus is on registered apprenticeships at all education levels with the goal of recruiting unemployed and underemployed individuals at least 18 years old, as well as high school students, into apprenticeships. As can be seen by the roster, the commission consists of members of the General Assembly, the Administration, representatives of labor organizations, and employer appointments by the Governor.

Throughout its two-year existence, the commission is expected to identify the largest occupational sectors with current or projected skill shortages, including health care, information technology, public service, manufacturing, and business services. The commission must also examine the best practices for scaling registered apprenticeships, examine industries that would benefit from creating and scaling apprenticeships, and explore degree apprenticeships in fields requiring degrees, including health care, teaching, and other public services. The commission is also expected to examine existing registered apprenticeships in the State and explore how to scale them with registered apprenticeships at the federal level and in other states, as well as identify the funding needed to expand registered apprenticeships.

It is anticipated that the commission will make recommendations on:

- specific goals by occupation and year to reach 60,000 apprentices by 2030, with 45% of high school graduates in apprenticeships by 2031; and
- strategies to achieve these goals, including recruiting new registered apprenticeship sponsors and apprentices for existing and new registered apprenticeships, and appropriate funding levels.

However, Chapter 168 specified that it is the intent of the General Assembly that, in the event of a conflict between a decision or policy of the commission and the ongoing Career and Technical Education (CTE) Committee related to youth apprenticeships, the CTE Committee's decision or policy shall control.

This report of the commission is divided into four parts. The first and second parts describe the state of apprenticeship generally and the status of registered apprenticeships in Maryland. Parts three and four cover the content of the commission's meetings and include recommendations of the commission.

What Is Apprenticeship

Apprenticeship is a training method that has been practiced for centuries worldwide, where a novice learns an occupation from a person who has mastered that occupation. In the modern era, apprenticeship is both a job and a learning experience, allowing an individual to earn a wage while gaining skills through on-the-job learning and related technical instruction (RTI). A national apprenticeship and training program was established in federal law in 1937 with the passage of the National Apprenticeship Act, also known as the Fitzgerald Act. The purpose of the Act was to promote national standards of apprenticeship and to safeguard the welfare of apprentice workers.

Generally, apprenticeship is a voluntary, industry-sponsored program that prepares individuals for occupations typically requiring high-level skills and related technical knowledge. Apprenticeships are sponsored by one or more employers or jointly by a labor-management committee. In a registered program, an apprentice receives supervised, structured, on-the-job training (OJT) under the direction of a skilled journeyman and RTI in a specific occupation. Apprenticeships are designed to meet the workforce needs of the program sponsor. Many industry sponsors use apprenticeship as a method to train employees in the knowledge necessary to become a skilled worker, which also means the number of apprenticeships available is dependent on the current workforce needs of the industry and the capacity and willingness of employers or employer groups to supervise them.

Apprenticeships are available to individuals age 16 and older; an employer, however, may set a higher entry age. By law, individuals must be age 18 to apprentice in hazardous occupations, although there are some exemptions available to minors who are registered as apprentices. Time-based apprenticeships last from one to six years and involve a minimum of 144 hours of RTI and at least 2,000 hours per year of OJT.

State of Apprenticeship

Apprenticeships are a time-tested approach to learning for productive careers. They offer participants a distinctive combination of learning in classrooms, structured applied learning at the

workplace, a job that pays as they contribute progressively to production, and a recognized occupational credential. Apprenticeship programs may improve the learning process (as students directly apply what they learn), encourage student engagement, incentivize students to perform well in academic courses, increase the match between workers' skills and labor market demands, and widen access to rewarding careers, especially for workers who prefer experiential learning over traditional classroom education. Recent findings from the evaluation of the American Apprenticeship Initiative (AAI) reinforce other studies showing substantial earnings gains associated with apprenticeships, including apprenticeships outside the building trades (Katz *et al.* 2022). Apprenticeships also yield a return to employer investments through training in the context of the employer's organization. The AAI evaluation results show most participating employers achieved a positive return on their apprenticeship investments (Kuehn *et al.* 2022).

Apprenticeships in the United States have long played a major role in training highly skilled electricians, carpenters, pipefitters, and other crafts. Yet, apprenticeships have played a historically minor role in our country's overall approach to workforce development and have not been as prevalent in preparing workers for other challenging careers outside of the skilled trades.¹ In 1949, the 230,000 apprentices made up 0.37% of the work force. By 2011, the apprentice share had dropped to 0.22% of the work force. With the economic recovery and federal investments, the number and share of registered apprenticeships increased significantly over the subsequent 12 years. By 2023, the share of civilian apprentices in the labor force had reached 0.32%, still somewhat lower than the 1949 share. Despite some penetration in information technology and health care, apprenticeships remain dominated by construction trades. Over 60% of apprenticeships are still in the construction industry. On the other hand, new apprenticeships are increasingly outside the construction field. Between 1999 and 2019, new apprenticeships outside construction raised their share from 27% to 42% of total new apprenticeships. It is important to note that because of their longer duration (typically three to five years), the construction share of active apprentices at a point in time is higher than its share of new apprentices.

One often overlooked aspect of apprenticeship data is the large but undetermined number of apprenticeships that are not registered with the federal or state apprenticeship offices. The scale of unregistered apprenticeships may be as large as registered apprenticeships (Jacoby and Lerman 2019). Furthermore, little is known about the quality of these apprenticeships. Another often overlooked aspect of apprenticeship is the large number of military apprenticeships. As of 2023, 112,000 of the 646,000 apprenticeships were in the United States Military Apprenticeship Program.

An important feature of the national apprenticeship system is the split responsibility for registration and oversight between the federal office of apprenticeship and state apprenticeship agencies (SAAs). Just over half the states, including Maryland, have been recognized by the federal office to act on its behalf to register and oversee programs in their state. This approach sometimes complicates the process by which employers register their programs and weakens coordination of apprenticeships across the country.

¹ The following data come from the Employment and Training Report of the President: 1978, from the data and statistics section of the Office of Apprenticeship website, and from the Bureau of Labor Statistics.

The majority of apprentices are adults between the ages of 25-54, although the proportion of all registered apprentices who are under 24 years old has been slowly growing since 2020. For many years, a few initiatives have promoted youth apprenticeships that are not part of the registered apprenticeship system, including programs in Georgia and Wisconsin, as well as the foundation-sponsored Partnership to Advance Youth Apprenticeship organized by the New America Foundation. Although the data are elusive on youth apprenticeships starting in high school, the scale of Wisconsin's program (8,200 apprentices in 2022-2023) exceeds all other youth apprenticeship programs combined.

Until 2015, the federal government spent only about \$30 million per year to pay for a modest staff in the U.S. Department of Labor's (USDOL) Office of Apprenticeship. As awareness increased of the growth and scale of apprenticeships in Australia, Canada, and England and the gains linked to Apprenticeship [South] Carolina, funding began to increase. The Obama Administration allocated \$175 million over five years to an apprenticeship initiative, and the U.S. Congress and Trump and Biden Administrations increased outlays to \$160 million in 2019 and nearly \$300 million in 2023. The funds have gone to apprenticeship training providers, intermediaries, and states through a series of individual grants.

In response, states have been passing laws to support apprenticeships. Many governors of both political parties highlight the potential of apprenticeship. The number of bills and laws referencing apprenticeship more than doubled between 2007 and 2021.² News stories about apprenticeship in the United States doubled from about 1,600 in 2006-2007 to almost 3,200 in 2020-2021. The response by states, the federal government, and the private sector has been serious but not sufficient to scale U.S. apprenticeships to levels experienced in many other countries.

A recent study published by the Burning Glass Institute and Multiverse (Sigelman and Blair 2023) describes the potential scale of apprenticeship by highlighting the growth of apprenticeships in 149 occupations. The paper suggests that the United States could expand apprenticeships in these occupations from the current 50,000 per year to 830,000 per year. Adding apprenticeships in teaching and other professions could raise annual apprenticeship opportunities beyond 1 million per year.

Apprenticeship in Maryland

Along with 31 other states and the District of Columbia, Maryland has chosen to operate its own apprenticeship programs under federal law through an SAA. The Division of Workforce Development and Adult Learning (DWDAL) within the Maryland Department of Labor (MDL) is the SAA for the State and is responsible for all activities regarding registered apprenticeships, including oversight of State apprenticeship programs. More specifically, as the SAA, DWDAL approves new apprenticeship programs as well as changes to current programs and ensures compliance with State and federal requirements. The approval process involves assessing the

² Based on Lexis-Nexis search.

appropriateness of an apprenticeship program in a proposed industry, the education that will be provided to the apprentice, the current staffing level of the entity proposing the program to determine whether adequate supervision can be provided, recruitment and retention efforts, and the overall operations of the entity. The Maryland Apprenticeship and Training Council (MATC) serves in an advisory role for legislation and regulations, recommending changes to update apprenticeship laws.

As of November 28, 2023, there were 11,530 apprentices registered in 125 different occupations, with more than 400 approved registered apprenticeship programs and more than 3,800 employers. There were 1,825 Certificates of Completion for apprentices processed between January 1, 2023, and November 28, 2023. The State added 38 new apprenticeship programs in 2023. The diversity of Maryland's apprenticeship system has also increased since the transfer of the program to DWDAL in 2016. The percentage of minority apprentices increased from 36% in November 2016 to 44% in November 2023. Likewise, the percentage of female apprentices increased from 3.7% in November 2016 to 7.7% in November 2023.

Overview of Commission Meetings

The commission met four times in 2023. Recordings of all commission meetings, materials presented during the meetings, and background materials are available on the Department of Legislative Services (DLS) website at the following link: [Apprenticeship 2030 Commission](#).

September 5 Meeting

During the first meeting, the commission reviewed its charge, and the Chair provided an overview of what he hoped the Apprenticeship 2030 Commission would accomplish. The commission also received briefings from MDL, the Maryland State Department of Education (MSDE), and Dr. Robert Lerman, a consultant to the commission from the Urban Institute. The presentations were designed to give the commission a general overview of apprenticeship.

The first presentation from MDL provided an overview of the registered apprenticeship system in Maryland. The presentation covered what constitutes a registered apprenticeship, the regulation of registered apprenticeships, the number of registered apprenticeships and apprentices, and programs that support apprenticeships and apprentices.

Next, MSDE also provided an overview of apprenticeships with a focus on apprenticeship programs in the Blueprint for Maryland's Future, which mostly concerns apprenticeships for high school students. The MSDE presentation included a description of its grants that support apprenticeship, a "spotlight" of selected grantees efforts, an overview of youth apprenticeships in Maryland, the activities of the CTE Committee, and "spotlights" of selected student apprentices.

Dr. Lerman concluded the meeting's presentations with an overview of apprenticeships generally, including research, public policies, and international comparisons. Dr. Lerman relayed that there are opportunities for expanding apprenticeship in the United States. Dr. Lerman proceeded to discuss the evolution of apprenticeship, the complex U.S. apprenticeship system, thriving apprenticeships in other countries, notably European countries, benefits to employers and employees, and policies for expanding or "scaling" apprenticeships.

October 3 Meeting

During the second meeting, the commission received a comparative overview of apprenticeship programs from Dr. Lerman. The overview included how apprenticeships are governed in Maryland and other states, a comparison of international apprenticeship models and systems, and a comparison of intermediaries in the United States and in other countries.

Next, the commission was briefed on apprenticeship case studies from three industries that have had success with apprenticeships in Maryland – building and trade apprenticeships, information technology apprenticeships, and finance and accounting apprenticeships. The case studies covered issues including the terms of apprenticeships, the ratio of apprenticeships to mentors, work hours, wages, and completion successes. After the case studies were presented, the commission engaged in a discussion about best practices and lessons learned from the various apprenticeship case studies.

The commission also received a presentation from the Maryland Apprenticeship and Training Program (MATP) on SAA functions and the funding landscape for registered apprenticeship expansion in Maryland. Finally, the commission had an in-depth discussion about methods to expand registered apprenticeship programs to other occupations.

Apprenticeship 2030 Commission Workgroups

During the second meeting, a number of issues were raised that the commission believed needed to be addressed in order for the State to meet its goals set in the legislation. Between the second and third commission meetings, the commission established four informal workgroups to further discuss some of the issues raised during the second meeting. These workgroups focused on (1) CTE interoperability; (2) the role of intermediaries; (3) activating employer demand; and (4) business models and funding. At the third meeting, each workgroup presented its findings.

November 8 Meeting

The commission held an in-person meeting for its third meeting to explore the findings and recommendations of the workgroups. The workgroups were charged with specifically focusing on ways to increase the number of registered apprentices to 60,000. Each workgroup was allowed to seek the advice of outside experts, in addition to capitalizing on the expertise of commission members to formulate their recommendations.

The recommendations from each workgroup can be organized into overarching categories. The recommendations from the workgroup for CTE interoperability focused on providing education regarding the misperceptions about apprenticeships, recruitment of students and employers, addressing challenges related to transportation and student schedules, and providing proper resources. The workgroup on the role of industry intermediaries identified recommendations focusing on rapid registered program development and implementation support, providing technical assistance and building partnerships, and supporting a diverse and inclusive apprenticeship pipeline. The recommendations from the workgroup on activating employer demand focused on possible employer incentives, simplifying the registration process, collaboration and networking with educational institutions and industry groups, customization of apprenticeship programs, awareness and advocacy for apprenticeships, methods for quality assurance, the collection and sharing of research and data, and ways to continuously assess and improve apprenticeship programs. The workgroup on business models and funding options focused on recommendations regarding new funding models, including a public funding option and possible payroll contributions by industry sector.

During the meeting, each workgroup offered commission members an opportunity to discuss the various recommendations and ask questions. The workgroups will continue to meet to learn more about their focus areas for the purpose of clarifying and narrowing their recommendations.

Recommendations and Conclusions

The commission is honored to deliver its first set of recommendations on expanding registered apprenticeships in Maryland. The dedicated commission members began with a united belief that apprenticeships are the key to unlocking new pathways to work, wages, and wealth creation for all Marylanders.

The commission's mandate was to focus on how to achieve the goal of having 60,000 registered apprentices by 2030, with special consideration given to the Blueprint's goal of having 45% of high school students complete the high school level of registered apprenticeship prior to graduation. Focusing on these two objective targets, the commission set forth the following key visionary goals:

- Any Marylander from any racial, geographic, or educational background will have access to a registered apprenticeship that leads to careers providing family advancing wages, and long-term meaningful professional advancement. Registered apprenticeships are not just about employment but are also a form of standard-driven education and training that enable new pathways to good careers that lead to long-term wage growth and family wealth accumulation. Maryland will close the opportunity gap by ensuring equitable access and predictable on-ramps to well-paying careers.

- For industry, Maryland will be seen by leading employers as the best place to create their long-term workforce, with robust skilled and scaled talent pipelines to support the industries of the future. It is also an opportunity in which organized labor and employers can collaborate to develop well-rounded apprenticeship programs that incorporate the knowledge and perspective of experienced workers while safeguarding worker protections. The goal is to make the State's registered apprenticeship model and our workforce a key asset in attracting private and public investment into Maryland.
- Maryland will be a recognized leader in education, with registered apprenticeships extending into high school when occupationally appropriate. Registered apprenticeships at all education levels will be aligned with the higher education ecosystem, including interoperability and transferability of skills/competencies for degree eligibility. Registered apprenticeships also enable youth to receive wages while they learn, which is critical to closing the opportunity gap for high-demand careers of the future.
- Registered apprenticeships are key to ensuring our State's long-term economic competitiveness and shared prosperity. There are widespread workforce shortages across a myriad of high-demand industries. Expanding and accelerating adoption of registered apprenticeships will lead to more place-based work opportunities for all Marylanders and business investment into underinvested communities.

The commission also established key priorities to focus its first set of recommendations. The key priorities are as follows.

Activating Employer Demand

Employers should want to adopt registered apprenticeships not just because they want to be good corporate citizens, but because it is economically advantageous. The commission agreed that for registered apprenticeships to become a mainstream talent acquisition process, the programs should fundamentally be more economically attractive when compared to the current model of recruiting from the open market. The cost required to train, mentor, and guide apprentices to OJT success should be less than the current open market recruitment model, while being at least as efficient. There are many advantages with registered apprenticeships – more economical, better employee retention, stronger workforce engagement and productivity – that are often benchmarked against a traditional open market recruitment model. However, different employers and industries often have an opaque understanding of the true costs of talent acquisition and even less clarity on long-term workforce return-on-investment. This priority helped focus the commission's discussions on public investment, incentivizing employer investments, raising awareness with employers and employer groups, and research on outcomes and data.

Apprenticeship intermediaries are organizations that help employers develop, initiate, and expand registered apprenticeship programs. Intermediaries can be industry associations, training providers, nonprofit and community-based organizations, labor-management partnerships, or workforce development boards. The commission intends to learn how successful intermediary

ecosystems work in Maryland, other states, and countries, across different occupations and industries, and to evaluate intermediary options that could accelerate and scale up adoption of Maryland's registered apprenticeship system.

Developing an Interoperable Education and Apprenticeship Ecosystem

The second area of focus was on creating a more interoperable and fluid system between education and the registered apprenticeship system. Career readiness cannot simply be taught in classrooms, and there are differences between RTI and OJT and mentoring requirements across industries and occupations. The commission prioritized how to address both the skills gap through RTI in schools and the experience gap through OJT across a multitude of industries. The commission also prioritized its attention to creating a more fluid system between high schools, registered apprenticeship sponsors, and higher education, with issues like credentialing, skill standards, and integrating CTE goals into the system.

Removing Barriers by Focusing on Outcomes Not Outputs

The final priority was for the commission to shift its mindset to focus on outcomes versus outputs, beginning with removing existing barriers to achieving those outcomes from the system. An important point to highlight is that the commission does not advocate for decreasing standards or changing existing labor and education laws. The focus was on removing barriers to adoption and scaling up the multitude of employer-sponsored and joint labor-management sponsored training programs by bringing them under a registered apprenticeship framework. This process began by engaging existing employers and sponsors and understanding their barriers – both actual and perceived. The commission endeavors to build upon the existing system and the gold standard registered apprenticeship programs in the State. The commission also recognizes there are a variety of apprenticeable occupations that vary by industry, region, and size of employer, and consideration was given to how to build upon the current program to address these variances. The commission will also seek to integrate greater perspective from organized labor into its work and future recommendations.

The commission categorized the recommendations by first addressing actions that can be taken directly through administrative action and then providing recommendations that were more fundamental that would require additional study by the commission and possible legislative action. These recommendations were all filtered through the lens of how the State can act with urgency and intentionality in achieving the goal of 60,000 registered apprentices by 2030. Legislation governing the creation of new programs designed to prepare individuals for a career should create safeguards that protect the standards set out in existing programs. Any future related legislation should clarify that State agencies or localities creating new workforce programs in the skilled trades should meet or exceed standards set out by current federal and state apprenticeship agencies.

The following are the recommendations adopted by the commission. The recommendations are grouped by administrative actions and further commission study to shape legislative or administrative actions.

Category 1 – Administrative Actions

Harmonize Apprenticeship Programs Targeted Toward Youth

A significant ramp-up is required to bring youth into apprenticeship programs. There is an urgent need for clarity and consistency in definitions of programs available and in what counts toward the Blueprint 45% goal, as the current framing and information available for the 45% goal has led to confusion. Maryland has launched a Youth Apprenticeship Program, but more options are required to meet the Blueprint goal that, by the 2030 school year, 45% of high school students from Maryland public schools complete the high school level of a registered apprenticeship (or another industry-recognized credential) prior to graduation. Furthermore, it is important that youth apprenticeships be designed as learning experiences and entry pathways into occupations and to protect the welfare of young people and to preserve their right to a four-year high school education.

Recommendation 1: The CTE Committee should issue guidance clarifying that the most important outcome is for high school graduates to be on a structured career pathway at the time of graduation, whether or not they plan to attend college.

Recommendation 2: The CTE Committee should issue guidance clarifying the priority focus on registered apprenticeship/School-to-Apprenticeship within the Blueprint’s 45% goal.

Strategy and Inter-agency Alignment and Coordination for Apprentice Recruitment – Allocate Proper Level of Resourcing for CTE

The CTE Committee of the Governor’s Workforce Development Board (GWDB) is responsible for facilitating the partnerships and providing necessary frameworks that will support work toward the Blueprint’s 45% high school apprenticeship goal. This work requires the CTE Committee and its staff to facilitate collaboration between, and lean on, the expertise of multiple State departments, industry representatives, CTE directors, apprenticeship experts, and local education agencies and local workforce development boards, among other stakeholder groups integrating the work of career counselors, to match students to apprenticeship opportunities. This work also involves deep collaboration and coordination between local education agencies, local workforce development boards, MSDE, Maryland employers, and others. The CTE Committee and the Maryland Workforce Association have already begun partnering on, and have subcontracted support for, development of additional guidance as well as technical assistance, peer learning, and best practice sharing opportunities for career counselors in 2024. To affect real change and support attainment of the 45% goal, the CTE Committee must be resourced and staffed appropriately.

Recommendation 3: The Department of Budget and Management (DBM) should consult the original DLS Blueprint fiscal note and GWDB/CTE Committee staff on what budget and staffing resources are needed to achieve the work required of the committee under the Blueprint.

Recommendation 4: The CTE Committee should also be responsible for developing communications to educate and raise awareness of career readiness and apprenticeships in school. Career readiness and college readiness should not be mutually exclusive. The goal is to change perceptions of apprenticeships as only applying to “non-college” bound learners. Registered apprenticeship opportunities and career readiness should be given equal consideration to college readiness. There needs to be more awareness that apprenticeships can be great career paths for youth seeking degrees as well as those who are not.

Recommendation 5: The CTE Committee should study adapting high school performance evaluation metrics to incorporate metrics for career readiness, including academic, technical, and employability skills, and registered apprenticeships. Currently, high schools are heavily weighted toward college readiness metrics versus successful work outcomes.

Workgroup – Potentially with CTE Committee – Addressing Barriers to High School Juniors and Seniors Participating in Registered Apprenticeships

There are barriers unique to high school level registered apprenticeships, such as transportation to employer sites, lack of drivers’ licenses, workers’ compensation insurance, and employer biases against hiring students under 18 years of age, that limit the ability of students to participate in registered apprenticeships. There are also apprenticeable occupations for which a higher minimum age has been appropriately set because of the nature of the work or working conditions. Additionally, there may be *de facto* penalization for earning registered apprenticeship wages on eligibility for cash assistance, food, and housing assistance programs. When studying the preceding, the workgroup should consider the following:

- digital/remote apprenticeships where it makes sense for the employer and the student, which is particularly compelling for more remote locations around the State where physical apprenticeships are not within a reasonable commuting distance;
- identifying opportunities to provide space to employers near the host schools so that students can have easier access; and
- where possible, look at providing transportation to and from worksites.

Recommendation 6: Form a workgroup addressing major aspects of high school juniors and seniors participating in apprenticeships, including their rights and benefits as employees and barriers such as those mentioned above.

Recommendation 7: The Attorney General and the Maryland Commission on Civil Rights should issue public guidance to employers and to the public making clear that age discrimination against young people who can work legally is against the law in Maryland.

Recommendation 8: The Maryland Insurance Administration and the Workers' Compensation Commission should issue public guidance to employers on workers' compensation insurance to clarify that rates are not higher for 16- and 17-year-olds with work permits.

Recommendation 9: MDL and the Maryland Occupational Safety Health Administration should issue public guidance on occupational safety and health requirements for registered apprenticeships targeted at youth.

Recommendation 10: The commission should work with the Maryland Department of Human Services to analyze the potential loss of temporary cash assistance, Supplemental Nutrition Assistance Program benefits, housing assistance, and other aid when youth are employed in apprenticeships.

Developing Adaptable High School Schedules to Support Employer on-the-job Requirements

The current high school schedule can prove challenging for students participating in apprenticeships, as meeting the required in-school time while having enough time on the job is not always possible.

Recommendation 11: The CTE Committee and MSDE should explore a plan for high school schedules to help apprentices meet their school and work commitments under a registered apprenticeship.

Recommendation 12: MSDE should consider ways in which the "in school" requirements might be adjusted to better support students completing an apprenticeship. MSDE and the CTE Committee should explore new and innovative ways to leverage the new four-year Perkins plan to build, scale, support, and ensure the success of all students participating in a registered apprenticeship program.

Studying Subsidies for Registered Apprenticeships

There are existing federal and State funding opportunities to accelerate and scale up registered apprenticeships, such as the Workforce Innovation Opportunity Act and the State's Employment Advancement Right Now Maryland program. Using these funds to support the start-up costs of large group registered apprenticeship sponsors and to scale up existing apprenticeship intermediaries should be studied.

Recommendation 13: GWDB and MDL should develop the new State Workforce Plan for Maryland with a priority on scaling apprenticeships.

Study How Quality Intermediaries Can Support Registered Apprenticeships

The State should consider building upon the standard definition of intermediary used by USDOL. This can be done, in part, by developing a checklist template of appropriate functions for apprenticeship intermediaries to handle. This will ensure that all critical facets of an apprenticeship program are considered and effectively planned for in registered apprenticeship creation.

Recommendation 14: MDL should continue expanding and properly resourcing MATC to support growth of apprenticeship programs.

Recommendation 15: The State should consider adopting a standardized definition of “intermediary” for Maryland.

Adapting State Hiring Process for Apprentices

There is a significant opportunity for the State to utilize registered apprentices in both hiring and contracting of personnel and staff. However, in some cases, there may be legacy staff requisition processes, such as the specification of PINs, that prevent the creation of apprentice pathways for even entry-level positions in State government, often with job requirements that are outdated.

Recommendation 16: The Governor should issue an executive order requiring DBM to conduct a statewide review, in consultation with State employee exclusive representatives, of personnel and staff openings where registered apprenticeships may be utilized. The executive order should be issued by March 1, 2024, and review completed by December 31, 2024.

Recommendation 17: DBM and MDL, in consultation with State employee exclusive representatives, should review and modify the State workforce requisition process to eliminate barriers to hiring registered apprentices.

Recommendation 18: DBM and MDL, in consultation with State employee exclusive representatives, should determine how to adjust the current labor recruitment process to support hiring of registered apprentices and deliver an action plan by August 1, 2024.

Pilot Expansion of Utilization of Registered Apprentices in Certain State Agencies for Information Technology, Modernization, and Cybersecurity Programs

The State is making large investments to modernize key information technology, software, and infrastructure systems across multiple agencies. Through the Department of Information Technology (DoIT), there are currently 57 major information technology development projects ongoing in the State. Many of these investments require multi-year commitments with hundreds of technical staff. There are large system modernization programs within existing agencies, and some of these agencies have already piloted or utilized registered apprentices.

The State was recently awarded a TechHub designation from the White House, and there will be an opportunity to receive federal funding that is directly tied to local and regional investment. A vital part of the evaluation for future TechHub funding is workforce development. A commitment from the State to procure goods and services from the TechHub would amplify regional investment and enable more federal funding to support apprenticeship in workforce development. Special consideration should be paid to existing minority- and women-owned business enterprises as part of these pilots to promote development of Maryland economic development goals.

Recommendation 19: The State should encourage building upon existing apprenticeship contract vehicles or create new contract vehicles to utilize more apprentices in either contingent or permanent technical staff positions.

Recommendation 20: The State should pilot a new workforce model that enables adoption of registered apprentices as part of the delivery of these engagements, with consideration given to pilots in DoIT, the Maryland Department of Health, MDL, and the Comptroller's Office.

Recommendation 21: State agencies should consider allocating some project set-asides or procurement preference for vendors who commit to sponsoring registered apprenticeship programs or who utilize or hire registered apprentices as part of their workforce strategy.

Recommendation 22: The State should support the Baltimore TechHub designation by setting aside major projects that can be delivered with a registered apprenticeship workforce from vendors participating in the TechHub. State procurement from the TechHub would count toward regional investment and unlock more federal funding to support apprenticeship workforce development.

Category 2 – Further Commission Study to Shape Legislative or Administrative Actions

Sponsor Recruitment – Consider Creation of a New Entity Dedicated to the Recruitment of Employers, Joint Labor-Management Partnerships, and Intermediaries

Reaching 60,000 apprenticeships by 2030 requires a coordinated, aligned effort at the State level, which simply cannot be achieved without proper resourcing. An entity dedicated to the recruitment of employers can support and coordinate the great work that is currently being done across the State and agencies, scaling it to the level required to deliver the volume of apprenticeships the commission seeks. The entity would have responsibility for advocacy and recruitment and ultimate accountability for ensuring that the demand for registered apprenticeships is large enough to realize the 60,000 registered apprentices by 2030 goal. The entity should also be responsible for activating employer demand across a broad spectrum of employers, with special consideration paid to regional needs, recruiting small businesses and minority business enterprises,

and supporting joint labor-management sponsorship of apprenticeship programs in occupations represented by a collective bargaining agent.

The commission should discuss and determine the cost of starting a new entity, the number of employees needed to staff the entity, and how to measure outcomes and scalability within the entity. Many states and countries have well-established employer and intermediary recruitment programs that operate across agencies. Programs in states such as South Carolina and North Carolina, as well as countries such as the United Kingdom, Germany, Switzerland, and Australia, should be examined. Additional research is also required to determine industries of highest demand for apprenticeable occupations to address workforce shortages.

Recommendation 23: Form a commission workgroup to provide a plan for establishing and properly resourcing an entity accountable for recruiting employers and intermediaries to offer apprenticeships, to study the existing landscape of resources focused on recruiting employers, and to formulate a proposed structure for the entity for consideration by the General Assembly during the 2025 legislative session.

Recommendation 24: The commission should schedule site visits to quality apprenticeship programs in Maryland and other countries.

Public Investment to Accelerate Adoption – Incentives to Activate Market Demand and Accelerate Employer Adoption

Sponsoring and hiring registered apprentices requires an up-front investment by employers, organized labor, and employer group sponsors. Focusing on outcomes, the commission took the approach of determining the most cost-effective ways to achieve the goal of accelerating adoption and scaling up the number of registered apprenticeships to the Blueprint. To accelerate the adoption of registered apprenticeship programs, the commission identified three categories of possible incentives.

Recommendation 25: A commission workgroup should study options for consideration by the General Assembly during the 2025 legislative session, including:

- **RTI Subsidy:** RTI is an up-front sunk cost for employers. While school-to-work apprenticeships can cover costs in high school, post-high school RTI may require additional funding. The State can “de-risk” this investment by reimbursing RTI costs borne by apprenticeship sponsors. The State could establish a RTI subsidy that is applicable for private training providers, group sponsors, and other employer-designated intermediaries that provide RTI on the sponsor’s behalf. Consideration should be given to establish standards for adjusting the subsidy determined by the duration or intensity of the RTI program to address a wider variety of pathways.
- **Procurement with a Purpose:** The State procures nearly \$16 billion of goods and services from the private sector annually, with much of this spending going for services provided

by out-of-state workforces. There is currently just one contract vehicle in the State (Innovative Workforce Solutions) that supports utilization of registered apprentices in the delivery of contracts. Maryland can activate massive public investment to supporting registered apprenticeships by being a more intentional and strategic customer of vendors making place-based workforce investments in the State.

- **OJT Subsidy:** The most critical investment decision for employers is committing to OJT, since it creates an implied commitment to hiring if the OJT period is successful. A common point of feedback from employers is the high cost of supporting the apprentice while they are in the OJT period. The State could provide an OJT subsidy to sponsors that is pay-per-apprentice to offset mentoring and coaching investments.

Recommendation 26: The commission should form a workgroup to study the impact of the State's current apprenticeship tax credit with comparable public investments in other states. Special consideration should be paid to provisions that may have a disproportionate impact on small and medium sized businesses such as provisions to access tax credits. The study should consider the relative effectiveness of tax credits versus other types of subsidies and make recommendations.

Recommendation 27: The commission should form a workgroup to work with the Department of General Services to develop a plan to create preferred procurement for vendors that sponsor registered apprenticeships or utilize apprentices in the delivery of work.

Workgroup to Simplify Sponsorship Registration Process

The workgroup should review the sponsorship registration process, focusing on ways to maintain high standards while simplifying it. The commission received wide ranging feedback from employers and employer group sponsors about simplifying the registration and reporting process within the current process. Topics of review include the following:

- mentorship ratios in different occupations;
- reducing manual reporting requirements for registered apprenticeships;
- enabling reporting via intermediaries and service providers; and
- automatic cross registration to federal registered apprenticeship programs.

Recommendation 28: The commission should form a workgroup comprised of registered apprenticeship sponsors, labor organizations, MATC, and others to study registration and reporting issues.

Workgroup to Develop Plans for Research and Data

Collection and sharing of data on the positive impact of apprenticeships, including return on investment, retention rates, and skills development, should demonstrate their value to employers and apprentices. The workgroup should consider the following during its deliberations:

- **Publish Longitudinal Data Studies:** Success of registered apprenticeship programs must be evaluated based on longitudinal data on retention, pace of promotions, wage progression and growth, and other factors. Publishing outcomes will also enable registered apprenticeship programs to improve over time.
- **Integrate Skills Taxonomies and Publish Effective Skills Standards:** There are many different and often competing skills standards across industry, education, and other third parties. A common taxonomy to integrate skills standards is lacking from different bodies. The work should be performed in collaboration with the CTE Committee Skills Standards group.
- **Quantify the Number of Youth Who Will Be Apprentice-ready Each Year, by Region:** It is important to understand the total addressable market of youth eligible for apprenticeship programs. Quantifying the estimated number of youth who will meet the minimum requirements to participate in apprenticeship programs each year will establish an available pool for school-to-work apprenticeships and will assist with establishing goals by occupation, industry, and region.
- **Developing a Survey or Scorecard for Employers or Potential Apprenticeship Sponsors to Identify Perceptions of and Concerns with Apprenticeship Programs:** Obtaining employer or potential apprenticeship sponsor input will help the commission address issues and identify potential corrective actions.

Recommendation 29: Form a commission workgroup to develop plans for research and data collection led by MDL.

Appendix 1. List of Acronyms

AAI: American Apprenticeship Initiative
CTE: Career and Technical Education
DBM: Department of Budget and Management
DLS: Department of Legislative Services
DoIT: Department of Information Technology
DWDAL: Division of Workforce Development and Adult Learning
GWDB: Governor's Workforce Development Board
MATC: Maryland Apprenticeship and Training Council
MATP: Maryland Apprenticeship and Training Program
MDL: Maryland Department of Labor
MSDE: Maryland State Department of Education
OJT: on-the-job training
RTI: related technical instruction
SAAs: state apprenticeship agencies
USDOL: U.S. Department of Labor

Appendix 2. Chapter 168 of 2023 – Senate Bill 104

Chapter 168

(Senate Bill 104)

AN ACT concerning

Labor and Employment – ~~Apprenticeships~~ Apprenticeship 2030 Commission and Representation on the Apprenticeship and Training Council

FOR the purpose of requiring that the Apprenticeship and Training Council and consultants to the Council include representation by individuals who are Asian, Black, and Latino; establishing the Apprenticeship 2030 Commission to examine and make recommendations to expand access to apprenticeship to reduce skill shortages in high-demand occupations and provide affordable training for career pathways for young people ~~in the public and private sectors; requiring the Governor to include certain amounts in certain fiscal years in the annual budget bill for a certain purpose;~~ and generally relating to ~~apprenticeships~~ the Apprenticeship 2030 Commission and representation on the Apprenticeship and Training Council.

BY repealing and reenacting, with amendments,
 Article – Labor and Employment
 Section 11–403(b)
 Annotated Code of Maryland
 (2016 Replacement Volume and 2022 Supplement)

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
 That the Laws of Maryland read as follows:

Article – Labor and Employment

11–403.

(b) (1) There is an Apprenticeship and Training Council as part of the Division of Workforce Development and Adult Learning. The Council consists of 12 members all of whom shall be appointed by the Governor of Maryland, with the advice of the Secretary and with the advice and consent of the Senate of Maryland.

(2) Four of the members shall be representatives of employee organizations; one shall be an employee; five shall be representatives of employers; and two shall be appointed from the general public.

(3) **(I)** The membership of the Council shall, to the extent practicable, reflect the geographic, racial, ethnic, cultural, and gender diversity of the State and shall include representation by individuals with disabilities **AND INDIVIDUALS WHO ARE ASIAN, BLACK, AND LATINO.**

(II) Consultants to the Council shall, to the extent practicable, reflect the geographic, racial, ethnic, cultural, and gender diversity of the State and shall include representation by individuals with disabilities **AND INDIVIDUALS WHO ARE ASIAN, BLACK, AND LATINO.**

(4) In advising the Governor, the Secretary shall give consideration to a balanced geographic representation from all of Maryland and a representative sampling and mix of Maryland industry.

(5) One member shall be appointed as Chairman by the Governor, with the advice of the Secretary, and serve as Chairman at the pleasure of the Governor. The Assistant State Superintendent, Career and Technology Education, and the Maryland State Director of the Office of Apprenticeship, U.S. Department of Labor, shall serve as consultants to the Council without vote.

(6) The Governor, with the advice of the Secretary may appoint up to three additional consultants to the Council from the public at large.

SECTION 2. AND BE IT FURTHER ENACTED, That:

(a) (1) There is an Apprenticeship 2030 Commission.

(2) The purpose of the Commission is to examine and make recommendations to reduce skill shortages in high-demand occupations and provide affordable training for career pathways for young people ~~in the public and private sectors.~~
by:

(i) expanding registered apprenticeships in industry sectors with skill shortages;

(ii) growing the number of registered apprenticeships to at least 60,000 by 2030; and

(iii) reaching the Blueprint goal for 45% of high school graduates completing the high school level of a registered apprenticeship.

(3) The Commission shall focus on registered apprenticeships at all education levels with the goal of recruiting unemployed and underemployed individuals at least 18 years old, as well as high school students, into apprenticeships.

(b) The Commission consists of:

~~(1) two representatives each from the Public Safety Apprenticeship Workgroup, the Healthcare Apprenticeship Workgroup, and the Transportation Apprenticeship Workgroup established in the Maryland Department of Labor, as directed by the 2022 Joint Chairmen's Report;~~

~~(2) the Chair of the Apprenticeship and Training Council, or the Chair's designee; and~~

~~(3) the Chair of the Career and Technical Education Committee, or the Chair's designee.~~

(1) four members of the Senate of Maryland, appointed by the President of the Senate;

(2) four members of the House of Delegates, appointed by the Speaker of the House;

(3) the Secretary of Labor, or the Secretary's designee;

(4) the Secretary of Commerce, or the Secretary's designee;

(5) the State Superintendent of Schools, or the Superintendent's designee;

(6) the Secretary of Higher Education, or the Secretary's designee;

(7) the Chair of the Governor's Workforce Development Board, or the Chair's designee;

(8) the Chair of the Maryland Apprenticeship and Training Council, or the Chair's designee;

(9) the Chair of the CTE Committee, or the Chair's designee;

(10) four members designated by the President of the Maryland State and DC AFL-CIO, including individuals representing the building trades, health care workers, and public service unions; and

(11) four members representing a diverse range of employers, with consideration given to including a minority contractor, appointed by the Governor.

(c) The chair of the Commission shall be ~~elected by the members of the Commission~~ jointly selected by the Governor, the President of the Senate, and the Speaker of the House.

(d) The Department of Legislative Services, with the assistance of staff from the State agencies represented on the ~~workgroups described in subsection (b)(1) of this section~~ Commission, shall provide staff for the Commission.

(e) A member of the Commission:

(1) may not receive compensation as a member of the Commission; but

(2) is entitled to reimbursement for expenses under the Standard State Travel Regulations, as provided in the State budget.

(f) The Commission shall:

~~(1) review the work of the individual workgroups described in subsection (b)(1) of this section;~~

~~(2) make preliminary recommendations regarding funding needed to expand public and private sector apprenticeship pathways; and~~

~~(3) work with any consultants contracted by the Department of Legislative Services as required by the fiscal year 2024 operating budget to examine national and international best practices.~~

(1) identify the largest occupational sectors with current or projected skill shortages, including health care, information technology, public service, manufacturing, and business services;

(2) examine the best practices for scaling registered apprenticeships used in other states and countries;

(3) examine industries that would benefit from creating and scaling registered apprenticeships;

(4) explore degree apprenticeships in fields requiring degrees, including health care, teaching, and other public services;

(5) engage members of the employer and labor communities to identify needs for registered apprenticeship career pathways;

(6) examine existing registered apprenticeships in the State and how best to scale them with registered apprenticeships at the federal level and in other states;

(7) identify funding needed to expand registered apprenticeship pathways and how to best disburse dedicated funding; and

(8) make recommendations regarding:

(i) specific goals by occupation and year to:

1. reach 60,000 apprentices by 2030; and

2. have 45% of high school graduates in apprenticeships by 2031; and

(ii) strategies to achieve the goals recommended under item (i) of this item, including:

1. recruiting new registered apprenticeship sponsors and apprentices for existing and new registered apprenticeships; and

2. appropriate funding levels.

(g) On or before December 1, ~~2024~~ 2023, the Commission shall report its findings and recommendations to the Governor and, in accordance with § 2–1257 of the State Government Article, the General Assembly.

(h) It is the intent of the General Assembly that in the event of a conflict between a decision or policy of the Apprenticeship 2030 Commission and the Career and Technical Education Committee established under § 21–209 of the Education Article related to youth apprenticeships, the Career and Technical Education Committee’s decision or policy shall control.

~~SECTION 3. AND BE IT FURTHER ENACTED, That, for each of fiscal years 2025 through 2027, the Governor shall include in the annual budget bill an appropriation in the following amounts to the County Executive and County Council of Prince George’s County to award grants to a nonprofit entity located in Prince George’s County to provide workforce development services to at least 2,000 youth and adults in the community:~~

~~(1) for fiscal year 2025, \$1,030,030;~~

~~(2) for fiscal year 2026, \$1,106,996; and~~

~~(3) for fiscal year 2027, \$1,119,482.~~

~~SECTION 4. AND BE IT FURTHER ENACTED, That this Act shall take effect October 1, 2023. Section 2 of this Act shall remain effective for a period of 1 year and 9 months and, at the end of June 30, 2025, Section 2 of this Act, with no further action required by the General Assembly, shall be abrogated and of no further force and effect.~~

SECTION 3. AND BE IT FURTHER ENACTED, That this Act is an emergency measure, is necessary for the immediate preservation of the public health or safety, has been passed by a yeas and nays vote supported by three-fifths of all the members elected to each of the two Houses of the General Assembly, and shall take effect from the date it is enacted. Section 2 of this Act shall remain effective through December 31, 2024, and, at the end of December 31, 2024, Section 2 of this Act, with no further action required by the General Assembly, shall be abrogated and of no further force and effect.

Approved by the Governor, April 24, 2023.

Appendix 3. Commission Member Comments

Statement by Senator Mary Beth Carozza, Commission Member

I want to thank Chair Jacob Hsu for his leadership and recognize the effort of all the members of the Apprenticeship 2030 Commission as we collaborate to expand both adult and youth apprenticeships and other school to work pathways as a way to reduce Maryland's workforce shortage and to provide career pathways for our young people living in Maryland.

The recommendations from the Commission's Interim Report make clear that we have laid the groundwork on better understanding the current challenges in growing the number of apprentices to at least 60,000 by 2030 and in reaching the Blueprint for Maryland's Future goal for 45% high school graduates completing the high school level of a registered apprenticeship or an industry recognized credential (IRC).

The recommendations involving the Career and Technical Education (CTE) Committee within the Governor's Workforce Development Board are key to reaching the goals as outlined above. It will be essential for the Governor's CTE Committee to understand the challenges facing employers (both private sector and organized labor) and the school systems in reaching the apprenticeship goals and to put policies in place that allow for flexibility without compromising standards.

Providing multiple pathways for local school systems to reach the Blueprint's goal for 45% high school students completing a registered apprenticeship or an industry recognized credential is the key to reaching the goal. There should be a recognition that many businesses already are working with their local school systems in work-based learning programs including Internships, Employment Experience, Tutorial Internship, Community Work Experience, and CTE Work-Based Learning.

Regarding the expansion of youth apprenticeships, local school systems are advocating for incentives for businesses to sign on, realistic parameters for calculating the 45% goal, and for expansion of CTE programs that result in Industry Recognized Credentials.

Finally, there should be a focus on growing adult registered apprenticeship programs in both existing and new industries to address Maryland's workforce shortage and to give students a pathway from school to work by preparing them for participation in adult registered apprenticeships. This can be done in collaboration with employers, organized labor, and school systems to shape a long-term workforce with a skilled school to work pipeline that results in reducing Maryland's skilled workforce shortage and provides meaningful pathways for Maryland's young people.