



Career & Technical Education Expert Review Team

Howard County Public Schools Post-Visit Report

Governor's Workforce Development Board
Career and Technical Education Committee

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The Governor's Workforce Development Board is grateful to the CTE Expert Review Team (ERT) members that participated in the visit of this LEA's CTE programs, as well as central office and school leadership, staff, and students that contributed valuable insights during this CTE ERT visit.



FROM: Governor's Workforce Development Board CTE Committee

TO: Howard County Public Schools

DATE OF SUBMISSION: May 15, 2026

DATE OF VISIT: October 22, 2025

SUBJECT: CTE Expert Review Team Post-Visit Report

PURPOSE: This report summarizes the key observations, strengths, and opportunities for growth identified during the CTE Expert Review Team's site visit. It is intended to provide actionable feedback and highlight promising practices to support continuous improvement of high-quality career-connected learning in accordance with state policy and the *Blueprint for Maryland's Future* goals.

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Executive Summary

The *Blueprint for Maryland's Future* ("the *Blueprint*") established the Career and Technical Education (CTE) Committee within the Governor's Workforce Development Board (GWDB) to direct and coordinate the development of an integrated, globally competitive and aligned system for providing CTE to Maryland students in public schools, postsecondary institutions, and the workforce. As part of this effort, the *Blueprint* calls on the CTE Committee to establish, administer, and supervise Expert Review Teams (ERTs) to visit schools offering CTE pathways.¹ CTE ERTs are a key tool through which the state observes and tracks the progress of Local Education Agencies (LEAs) in implementing CTE programs that align with the CTE Committee's framework and policies and the *Blueprint's* vision and goals.² In particular, the *Blueprint* and Joint CTE Vision statement sets a goal that by the School Year (SY) 2030-2031, 45% of high school graduates who are college and career ready (CCR) shall complete the high school level of a Registered Apprenticeship or another industry-recognized credential ("45% goal").³

This report reflects a visit during Phase 1 of the CTE ERT visits. The purpose of Phase 1 is to assess the current state of CTE across all 24 LEAs to identify systemic challenges and establish a baseline for statewide improvement.

This report summarizes observations and initial recommendations that the CTE ERT developed by reviewing the LEA's self-reported data and by conducting interviews, focus groups, school tours, and classroom visits during the CTE ERT visit. The CTE Committee staff, along with volunteer CTE ERT members, have collaborated on this report to provide observations and preliminary points of analysis to readers.

In this report, readers will find the purpose of the CTE ERT, an overview of the LEA, a summary of the CTE ERT visit, Strengths, Challenges, and External (SCE) analysis, and Potential Next Steps for the LEA to consider.

VISIT OVERVIEW

LEA:	Howard County Public School System (HCPSS)
Date of Visit:	October 22, 2025
School(s) Visited:	Howard High School, River Hill High School Applications and Research Lab

¹ Md. Code Ann., Educ. § 21-209 (2024). <https://bit.ly/3W0JoeU>

² For a list of policies issued to date, please visit www.gwdb.maryland.gov/policy/.

³ CTE Committee, Maryland State Board of Education, and Accountability and Implementation Board. (2025, December). *Career and Technical Education (CTE) Vision for Maryland's Future*. Maryland Governor's Workforce Development Board. www.gwdb.maryland.gov/ctecomm/ctecomm-jointvisionstatement2025.pdf

This CTE ERT visited Howard County Public School System (HCPSS), located in Central Maryland. HCPSS offers 25 CTE programs at 1 CTE Center and 13 comprehensive high schools.

SUMMARY OF FINDINGS

Below is a summary of the observations and findings from this CTE ERT visit:

LEA's Progress Toward the Blueprint's 45% Goal for the School Year 2024-2025: (IRCs + HSLRA/Graduating Students)

12.6%

Internal Strengths

- Teacher Passion, Expertise, and Experience
- Expanding IRC Access and Success Toward 45% Goal
- CTE Alumni Engagement and Representation for Success
- Next Step Career Advising Framework
- Commitment to Equity and Access
- Comprehensive High School CTE Offerings
- Student Feeling of Community Within CTE Programs
- Focus on “Transferable Skills” Development
- Micromarketing

Internal Challenges

- School Counseling Disjointed from CTE Programs and Career Advising
- Staff Under Resourced to Support Special Populations
- CTE Competing with Dual Enrollment
- Varied IRC Attainment
- Budget Constraints
- Effective Marketing Not Being Prioritized
- Inequitable Representation in CTE Programs
- Emphasis on College

External Factors

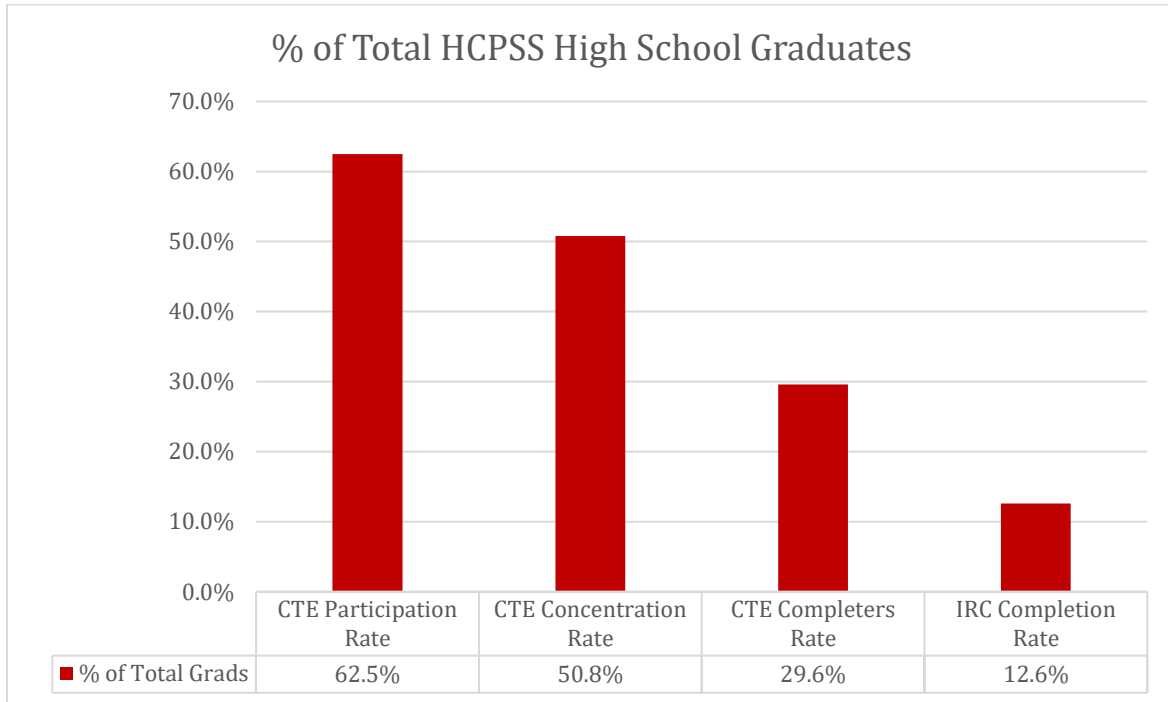
- Strength: County-wide Resources and Partnerships
- Strength: Strong Employer Representation
- Strength: Connection with Post-Secondary Institutions
- Challenge: Accessibility Policies Limiting IRC Attainment
- Challenge: Misalignment Between County Budget Cycle and HCPSS Hiring Needs
- Challenge: Demand for Work-Based Learning Outpaces Availability

Potential Next Steps

- Further Leverage Data to Inform Decisions
- Consider Professional Development Around Career Advising
- Continue to Center CTE Teacher Voices in Decision-Making
- Consider Resources for Career Readiness Advising and Career Coaching
- Strategize Creative Ways to Address Conflicts with Dual Enrollment and Emphasis on College
- Increase IRC Attainment in Target CTE Programs

- Explore Regional Professional Learning Communities
- Consider Additional Micromarketing Messaging Campaigns
- Leverage CTE Teachers As Peer Recruiters
- Continue Leveraging Local Workforce Development Board (LWDB)
- Explore Technical Assistance with MSDE, the Maryland Department of Labor (MD Labor), and the CTE Committee in Meeting the Blueprint’s 45% Goal.

Figure 1: LEA CTE Summary Data for HCPSS in School Year 2024-2025



CTE Expert Review Team Background

PURPOSE

The *Blueprint for Maryland's Future* (“the *Blueprint*”), Md. Code Ann., Educ. § 21-209, established the Career and Technical (CTE) Committee as a unit within the Governor’s Workforce Development Board (GWDB).⁴ The GWDB serves as the Governor’s chief strategic and policy-making body for workforce development in the State of Maryland.⁵ The purpose of the CTE Committee is to direct and coordinate the development of an integrated, globally competitive, and aligned system for providing CTE to Maryland students in public schools, postsecondary institutions, and the workforce. The CTE Committee aims to fundamentally reimagine and redesign career-connected learning and career pathways to ensure all of Maryland’s students have real access to fulfilling and family-sustaining careers.

The *Blueprint* requires the CTE Committee to establish, administer, and supervise CTE Expert Review Teams (ERTs) to visit schools with CTE pathways.⁶ The CTE ERTs perform the following key functions through both qualitative and quantitative analysis:

1. **Monitoring:** determine whether Local Education Agencies (LEAs) are implementing CTE programs aligned to the *Blueprint*’s vision and monitor progress toward reaching the statewide goal that by the School Year (SY) 2030-2031, 45% of public high school graduates who are college and career ready (CCR) will have completed the high school level of a Registered Apprenticeship or another industry-recognized credential.
2. **Assessment:** analyze and assess the progress of LEAs in implementing CTE programs that align with the *Blueprint*’s CTE vision, Maryland’s CTE Framework as established by the CTE Committee, and associated policies.
3. **Technical Assistance:** analyze trends, identify challenges and best practices, and provide technical assistance to address issues and uplift best practices.
4. **Post-Visit Reports:** summarize findings and develop recommendations to address challenges faced by schools, LEAs, and the State in implementing the *Blueprint*. Submit reports to the LEA, Accountability and Implementation Board (AIB), and the CTE Committee.
5. **Action:** summarize key findings and make recommendations to the CTE Committee on strategies to address challenges, including policy changes and technical assistance, within the CTE Committee’s annual report or other avenues, as appropriate.
6. **Accountability:** Starting in Fiscal Year 2026 (FY26), the CTE Committee can make recommendations to the AIB on whether to withhold funds if an LEA is not making a

⁴ Md. Code Ann., Educ. § 21-209 (2024). <https://bit.ly/3W0JoeU>

⁵ Executive Order No. 01.01.2023.22. (2023). <https://tinyurl.com/execorder01012023>

⁶ Md. Code Ann., Educ. § 5-412 (2024). <https://tinyurl.com/5cb36cvy>

good faith effort to implement the *Blueprint* and is not demonstrating sufficient progress over time based on findings from CTE ERT visits.⁷

All of these functions build on each other, leading to a systemwide approach that is continuously improving the career-connected learning pathway for all students across Maryland.

On March 26, 2026, the AIB ratified a motion to amend the deployment strategy for CTE ERTs. This action was taken in accordance with Senate Bill 311 of the 2026 Maryland legislative session, which enacted a formal suspension of the ERT program. This suspension facilitates the development of a revised ERT implementation proposal by the AIB and Maryland State Department of Education (MSDE), which is due by November 1, 2026. Consequently, the AIB motion modifies the CTE ERT timeline, requiring the CTE Committee to conclude all Phase 1 visits by the end of the fall 2026 semester (i.e. visit all 24 LEAs). Phase 2 deployment will be deferred for the duration of the SY 2026-2027, during which time the CTE Committee will collaborate with the AIB and MSDE to identify and recommend an optimal, value-driven framework for the future operation of CTE ERTs.

CTE ERT APPROACH

The CTE ERT approach and plan is organized around two key principles: visits focused from an LEA-lense (rather than an individual school) as CTE strategies and programming is organized at an LEA level across the state; and a phased approach to completing and organizing visits over time. The CTE ERTs were organized with the following phased approach, which notes the pause in timelines of starting Phase 2 pursuant to the AIBs motion in March 2026:

Phase 1: Discovery (SY2024–2026)

- **Goal:** Establish a baseline of local strengths and systemic barriers to early implementation of the *Blueprint*.
- **Action:** Conduct field-level observations and collect data across all 24 LEAs to identify where technical assistance and state-level policy shifts are most needed.

Phase 2: Analyze & Assist

- **Goal:** Shift from observation to active alignment with the *Blueprint*, established policies, CTE Vision, and statewide CTE Framework.
- **Action:** Deploy targeted assistance and pursue policy or regulation changes to address common challenges.

Phase 3: Evaluate

⁷ Pursuant to Md. Code Ann., Educ. § 5-405, the AIB may release withheld funds to a school or local school system upon recommendation from MSDE, the CTE Committee, or an Expert Review Team - or if the school/LEA demonstrates sufficient progress in implementation or to improve student performance. In determining whether to release or withhold additional funds, the AIB shall consider whether a public school or local school system has been responsive to the recommendations of MSDE, CTE Committee, an Expert Review Team, and the AIB's staff. <http://bit.ly/3OMwcJh>

- **Goal:** Evaluate progress toward *Blueprint* goals and analyze outcomes; additional purposes to be developed during Phase 2.
- **Action:** Direct intensive support to LEAs struggling with progress.

Given the pause in CTE ERT visits once Phase 1 visits to all 24 LEAs are completed by the fall semester of the SY 2026-2027, this approach and structure may be amended. The CTE Committee will work closely with the AIB, and MSDE, to analyze the optimal structure and timelines for CTE ERTs.

CTE ERT VISIT MEMBERS

The CTE ERT visits consist of members from various backgrounds and expertise, ensuring a variety of analysis of the LEA's CTE programming.⁸ The CTE ERT typically consists of 10-14 individuals for each visit. This group is then split into two teams during the visit. The CTE ERT core team members must include:

- CTE Committee staff (1-3);
- CTE teacher (1): represented by a teachers' organization that, for the purposes of collective bargaining, represents a majority of teachers in the State or in a local school system, preferably a representative from a neighboring LEA;
- School/LEA leadership (1): i.e., Principal, Assistant Principal, LEA Lead CTE Staff Designee, or Blueprint Implementation Coordinator, preferably a representative from a neighboring LEA; and
- Employer, trade union representative, and/or apprenticeship sponsor (1)

Teams also typically include representatives from the:

- CTE Committee member or their designee
- Local Workforce Development Board staff or board member
- Local community college
- State agencies responsible for implementing the *Blueprint*, inclusive of MSDE and AIB staff

CTE ERT VISIT STRUCTURE

Every CTE ERT visit during Phase 1 adheres to the following structure:

Pre-Visit Data Analysis and Dialogue:

- LEA completes a schedule for the day (Appendix B)
- LEA completes and submits brief with quantitative and qualitative data (Appendix A)
ERT members review in advance of orientation and training session
- Virtual orientation and training session for ERT visit members with LEA leadership, including:

⁸ GWDB CTE Committee. (July 1, 2024). CTE Committee Expert Review Team Deployment Plan School Year 2024-2025. https://gwdb.maryland.gov/ctecomm/ctecomm-ctedeploymentplan_draftsy24-25_62624.pdf

- Pre-recorded training providing an overview of CTE ERTs, roles and responsibilities during visits, and what to expect from the day
- Virtual orientation (within 1-week prior to the visit):
 - Overview of CTE in the LEA provided by the LEA Lead CTE staff
 - Review and discussion of LEA data brief
 - CTE enrollment practices, observed challenges, and any other information the LEA Lead CTE staff deems necessary

Full-Day District Visit:

- **Where:** typically two schools per day, depending on the LEA CTE structure. Visits typically include both a CTE Center and comprehensive high school with CTE programming.
- **What:** Guided school tour, CTE classroom visits, and focus groups at each school with:
 - Students
 - CTE teachers
 - Career coaches/counselors, and possibly school counselors or work-based learning coordinators as relevant in each LEA
 - LEA administrators/leadership (optional)

Post-Visit Debrief, Assessment, and Reporting:

- CTE ERT members submit their notes and a short survey on initial feedback
- Virtual debrief held with ERT members 1-week after visit to discuss observed strengths and challenges
- CTE ERT members review post-visit report to provide feedback
- Post-visit report provided to LEA with option for asynchronous or synchronous feedback
- Final post-visit report submitted to the CTE Committee, AIB, and LEA leadership

At every visit, the team engages in discussions with stakeholders to gain insights into the strengths and challenges of the CTE programming. These conversations reveal valuable information about how CTE supports students' post-graduation pathways and career goals, as well as areas where the LEA could enhance program access and resources. The focus groups in particular aim to uncover the experience these stakeholders have in CTE by asking consistent questions about professional development opportunities, their opinions on their experience in CTE classes, perspective on hurdles, etc. (Appendix C).

CTE ERT POST-VISIT REPORT

Following each visit, CTE Committee staff drafts a report to present observations and preliminary analyses. To ensure accuracy, drafts are shared with the CTE ERT members and LEA lead staff prior to publication. These reports integrate quantitative and qualitative findings from the LEA data brief, classroom observations, focus group recordings, team discussions, and all feedback received from CTE ERT team members either written or during the debrief.



Phase 1 reports include a summary of the visit, LEA background information, and a Strengths, Challenges, and External (SCE) analysis to guide potential next steps. The SCE analysis organizes observations into internal factors - strengths and challenges - and external factors that emerge during the visit. This framework allows LEAs to target internal improvements, and it provides an opportunity to share best practices with other LEAs. During Phase 1, the observations and next steps documented in the post-visit reports are preliminary and do not address every challenge observed, they are also not meant as a directive, but rather the intent is that LEAs utilize the findings as opportunities of improvement to explore.

CTE Expert Review Team Visit to Howard County Public School System

CTE ERT VISIT MEMBERS

The CTE Expert Review Team visits consist of members from various backgrounds and expertise ensuring a variety of analysis of the LEA's CTE programming. The following is a list of members who joined this CTE ERT visit:

Shamara P. Bownes	Senior Director, GWDB-CTE
Adam Parry	CTE Supervisor, Washington County Public Schools
Amy Rock	CTE Instructional Supervisor, Prince George's County Public Schools
Christine Lynch	Contractor, CityWorks
Dave Harper	VP of Academic Affairs, Chesapeake College
Dr. Edrees Nawabi	Research Data Analyst, GWDB-CTE
Eugene Chong Qui	Career Readiness Coordinator, Baltimore City Public Schools
Heather Carias	Principal, Montgomery County Public Schools
Karen King-Sheridan	Director of Workforce Needs, MHEC
Katherine Swanson-Palmer	Program Manager, GWDB-CTE
Kristi Zehner	CTE Teacher, Montgomery County Public Schools
Minah Woo	VP of Workforce, Innovation, and Strategic Partnerships, Howard Community College
Pam Smith	Director of Department of CTE, Prince George's County Public Schools
Sheila Jackson	Apprenticeship Navigator, MD Labor
Tracey Hicks	CTE Teacher, Frederick County Public Schools

CTE ERT VISIT OVERVIEW

The CTE ERT visited Howard High School (HHS), River Hill High School (RHHS), and the Applications and Research Lab (ARL), which is Howard County's only CTE Center. HHS and RHHS serve as 2 of HCPSS's 13 comprehensive high schools with CTE offerings. The CTE Expert Review Team (ERT) split into two teams for the AM session, with Team 1 visiting HHS and Team 2 visiting RHHS. Both teams spent the PM session at the ARL.

LEA:	Howard County Public School System (HCPSS)
Date of Visit:	October 22, 2025
School(s) Visited:	Howard High School River Hill High School Applications and Research Lab

About Howard County Public School System

Howard County Public School System (HCPSS), located in Central Maryland, enrolls 18,827 high school students, and has a 62.5% participation rate in CTE for graduating students. HCPSS offers 25 CTE programs that cover a wide range of areas, from Accounting to Teacher Academy of Maryland. HCPSS is in alignment with the Local Workforce Development Board (LWDB) Plan's focus on building key sectors like Healthcare, IT, Manufacturing, and Education and Workforce Training.⁹ Business-related programs, Computer Programming/Science, Teacher Academy of Maryland, and Project Lead the Way – Engineering programs have the highest enrollment. This demonstrates the LEA's focus on developing a robust workforce targeting key sectors that are in-demand in this region.

HCPSS has 13 of its 25 CTE programs at the Applications and Research Lab (ARL). In order to enroll in a CTE program at the ARL, interested students must declare their interest in 10th grade and only 11th and 12th graders may enroll. When interest exceeds available enrollment, students are enrolled through a randomized lottery process and waitlists are generated. HCPSS's comprehensive high schools all offer the same 11 CTE programs and students are generally able to directly enroll as waitlists are not typically an issue. There are times where a course may not be able to run due to a lack of student interest or scheduling conflicts, but students have alternative pathways through Dual Enrollment at Howard Community College for most courses.

HCPSS has 62.5% of graduating students participate in CTE and 50.8% of graduating students are CTE concentrators.

Students enrolled in CTE programs have the opportunity to earn industry-recognized credentials (IRC), and 38.6% of graduating students from the SY 2024-2025 completed an IRC; however, this rate comes from the previously approved MSDE IRC and technical skills assessment (TSA) list as the updated policy and approved IRCs by the CTE Committee does not go into effect until the SY 2025-2026.¹⁰ As such, the CTE IRC Policy published in December 2024 may impact this LEA's attainment rate for 2025 and beyond.¹¹

HCPSS reports that 23 of 4,268 graduating students, or 0.5%, completed the high school level of a Registered Apprenticeship (HSLRA), aligned with the CTE Committee's Apprenticeship Policy issued December 2024.

⁹ Howard County Workforce Development Board. (2024). *Howard County Local Workforce plan 2024–2028*. <https://tinyurl.com/2c3yu495>

¹⁰ IRC completion data from the current *Blueprint*-aligned list will not be available until after the end of the SY 2025-2026.

¹¹ GWDB CTE Committee. (December 2024). Career and Technical Education: Industry-Recognized Credentials.

<https://www.gwdb.maryland.gov/policy/gwdbcte2024commindustrycredentialpolicy.pdf>

One unique aspect at HCPSS is their multitiered system of support model (MTSS) for the implementation of career counseling in alignment with *Blueprint* requirements. Tier one is curriculum-embedded programming designed to foster self-awareness and career awareness for all students, leveraging Naviance. Tier two is the Monthly Spotlight, an initiative designed to increase career awareness and intentionally connect students to specific career clusters based on their strengths and interests. Tier three is the Career Readiness Advisor (CRA)-led high school careers team that develops career-connected initiatives to meet the needs of the school community. Using HCPSS's powerful data systems, administrators, staff, and teachers may easily identify students who are in danger of not meeting the CCR indicator and provide targeted supports to make sure students succeed.

CTE Expert Review Team Observations & Analysis

OVERVIEW OF ANALYSIS

The following report is organized around a Strengths, Challenges, External (SCE) approach. A SCE analysis is meant to organize the CTE ERT's observations and notes into internal factors - Strengths and Challenges - and External factors and influences. Although the CTE ERT does not currently have a focus group specifying external stakeholders, external factors come up in conversations, focus groups, the debrief, and orientation that must be documented. With a SCE Analysis, readers may use this section to target changes and best practices internally and better understand how external factors may influence CTE.

It is important to emphasize that the following observations reflect insights that were documented as of the date of the visit. As such, it is possible that observations noted below have been altered or addressed since the CTE ERT visit was conducted.

INDICATORS OF INTERNAL STRENGTHS AND CHALLENGES

Strength: Teacher Passion, Expertise, and Experience

CTE teachers in Howard County Public School System (HCPSS) are passionate instructors with extensive expertise and experience in both the classroom and industry. Many of the CTE Teachers in the focus groups have taught for over a decade. CTE currently has the largest identified transfer rate, meaning teachers wanting to move to CTE from other areas within the HCPSS. The CTE ERT observed the strong sense of community and camaraderie among teachers, particularly at the Applications and Research Lab (ARL), where many of them have been teaching for a long time. One teacher in the focus group was a former ARL student and replaced someone who worked there for 39 years. As teachers said in focus groups,

“Once you're here, you stay until you're retired.”

“There's a lot of talent in our schools.”

HCPSS attributes high retention of CTE teachers to the Instructional Support Plan, which is a plan for all CTE staff where new teachers, non-tenured, provisional, or someone teaching a subject for the first time are partnered with a mentor teacher. These pairings meet, at minimum, once a month to co-plan, discuss best practices, etc. For individual teachers that are the sole teacher of their subject matter or content within the district (which is specific to the ARL), the Instructional Support Plan provides them the opportunity to visit teachers of the same content within other districts by providing a substitute teacher to cover their classes. CTE teachers are passionate experts, enhancing the classrooms with their consistency and experience with the support of administrators to effectively collaborate.

Strength: Expanding IRC Access and Success Toward 45% Goal

Howard County Public School System (HCPSS) is making progress toward the *Blueprint's* 45% goal and current projections in the LEA brief estimate HCPSS will meet the goal by the end of SY 2030-2031. In SY 2024-2025, approximately 12.6% of 12th graders graduated having completed a high school level Registered Apprenticeship or earned an IRC. In SY 2024-2025 they had 23 HSLRA completers, which is one of the highest across LEAs in the state. Given all of the varying contexts and large scale HCPSS is dealing with, HCPSS's progress toward the 45% goal and specific plans to meet that goal by SY 2030-2031 are a strength. The CTE ERT notes the following strategies, combined with consistent information and messaging to all stakeholders related to IRCs, as best practices to support their success towards the *Blueprint's* 45% goal:

Proactive Cohorting

HCPSS is taking a "cohort approach", where the emphasis is not just on 12th graders earning an IRC but an intentional review of the cohort from 9th grade and determining who is eligible for an IRC each year. With this approach, HCPSS is targeting the SY 2027-2028 9th grade class and plans to implement all of their policies and programs to support reaching the *Blueprint* goals by that class's graduation in the SY 2030-2031.

Investing in removing barriers to IRC Attainment

Additionally, HCPSS leveraged Perkins funding to support IRC attainment. Examples include, licensing all schools and locations that have been identified with relevant IRCs for the CTE Programs that are offered and running at those locations, which minimizes the need for students to travel offsite to take any IRC exams.

Integrating IRCs into Curriculum and Coursework

HCPSS backwards mapped approved IRCs with applicable programs, aligned them with available courses, and ensured that the CTE Department incorporates IRCs into the curriculum.

Apprenticeship Maryland Program & HSLRA

HCPSS is intentionally focused on expanding the high school level of Registered Apprenticeships and supporting the *Blueprint's* 45% goal. By leveraging the connections from the Apprenticeship Maryland Program and the Local Workforce Development Board, HCPSS has created a system that will continue to expand and be a leader in the state in HSLRA.

IRC passing rates increased from 64% to 78% in a two-year period and HCPSS's progress remains steady. HCPSS's intentional focus on expanding IRC success and HSLRA is a strength as their strategic approach is an effective model for the State of Maryland.

Strength: CTE Alumni Engagement and Representation for Success

In multiple CTE teacher focus groups, there was evidence of leveraging CTE alumni to support current programming. Teachers often utilize alumni to be guest speakers or judges

for competitions within select programs and offer examples of career exposure opportunities. In other instances, teachers leverage alumni to help make industry connections and support current teachers in remaining up to date on industry trends. There is not a formal tracking system in place to see where the alumni go after high school, but one teacher noted that about 20% of students remain in the orbit, and that helps teachers understand where current students may end up as postsecondary options or if there are specific events that should be on their radar. One teacher explained their appreciation for alumni by stating, “It’s sad when they graduate but the reward is when they come back and let you see how they arrived. What you poured into them comes back.” Students need to see a positive representation of people who come from similar backgrounds to know what successes they can potentially achieve. HCPSS’s ability to effectively engage alumni to serve as role models for current students is difficult for an LEA the size of Howard County, but their success is a testament to the rapport and connections teachers have developed with students.

Strength: Next Step Career Advising Framework

The thoughtful design of HCPSS’s Next Step Career Readiness Advising framework and partnership among HCPSS, the Howard County Office of Workforce Development (i.e. the Local Workforce Development Board), and Howard County Community College was apparent. For the implementation of career counseling in alignment with *Blueprint* requirements, HCPSS developed a multi-tiered system of support, the Next Step Career Advising. Within this framework there are 13 HCPSS Career Readiness Advisors working alongside the 12 Howard County Office of Workforce Development (OWD) Career Coaches. Specifically, HCPSS focuses on student engagement and curricular alignment, OWD focuses on connection with the local businesses and provides additional tier 3 supports, and HCC provides pathway support in alignment with the Monthly Spotlight (see below) (Tier 1) and post high school planning (Tier 3). This framework with targeted interventions supports equitable support across students and schools.

Tier 1 includes curriculum-embedded and school community initiatives focused on self-awareness, career awareness, and career readiness (students grade 6-12). Tier one supports ensure that all students receive individualized career counseling through a combination of three anchors:

- The first is curriculum-embedded programming designed to foster self-awareness and career awareness for all students by leveraging Naviance as the College and Career Ready platform.
- The second is their Monthly Spotlight, an initiative designed to increase career awareness and intentionally connect students to specific career clusters based on their strengths and interests.
- The third is the Career Readiness Advisor-led high school careers team, a multidisciplinary team of school staff and leadership that develops career-connected initiatives to meet the needs of the school community.

Tier 2 includes proactive supports for students at risk of not meeting the College and Career Standard (students grade 9-12).

Tier 3 includes counseling focused on placement into postsecondary opportunities (students seeking support in post-secondary pathway access).

HCPSS uses data-driven outreach efforts to support vertical articulation for students in danger of not meeting the CCR indicator beginning in middle school and continuing through the full transition to high school. The framework has a clear pathway to support students through “well-informed, career-focused pathway exploration and development” with the clear delineation of populations for each tier, roles of staff to support each tier, and expected responsibilities outlined. Ultimately, the Next Step Career Advising addresses the challenge of providing comprehensive and coordinated support for students at every level.

Strength: Commitment to Equity and Access

A strength of HCPSS is the overarching commitment to equity and access to all students, especially related to CTE programming. HCPSS’s strategic plan specifically outlines the school system’s commitment to equity and highlights “ensuring equitable opportunities and access” for all students as a top priority, coupled with fostering a culture of belonging. The CTE Department is under the Department of Equity and Innovation, further demonstrating how HCPSS values CTE programming and its role in equity for students.

All students have access to CTE, as each comprehensive high school offers the same 11 Career Academies. Junior Reserve Officer’s Training Corps (JROTC) is HCPSS’s only program where students are allowed to enroll in a different school and HCPSS offers bus transportation. In addition, every home school buses enrolled students to the Applications and Research Lab (ARL). In this way, HCPSS has addressed transportation challenges that have plagued many other LEAs. The ARL offers their programs through a lottery system, ensuring that every eligible student has the same opportunity to apply and engage in CTE programming regardless of their home school or academic track. HCPSS also reports that there are minimal waitlists and when there is a waitlist, students are chosen for enrollment based on a lottery system. To address challenges with waitlists, the ARL is currently undergoing renovations that will yield an additional 8 classrooms for programs of studies that historically had consistent waitlists over the past four years, which include Architectural Design, The Academy of Health Professions, and Graphic Design. Transportation and enrollment have been brought up as challenges in many LEAs across Maryland, but HCPSS has created a system that helps them overcome these common hurdles.

The Next Step Career Advising framework demonstrates this commitment by naming specific learners as targeted populations for Tier 2 support to include Special Education, English Language Development, Students Support and Engagement, and First-Generation College-Bound, to ensure these students are meeting the College and Career Readiness standard. While career resources are not broadly available in multiple languages, one Career Readiness Advisor shared that they partner with their Hispanic Liaison to call and text parents in Spanish to promote offerings. HCPSS also ensures equitable representation by hosting Historically Black Colleges and Universities (HBCUs) at Guilford Park High School’s

college and career fair every March, which is available to all HCPSS students. HCPSS also translates the course list into a wide array of languages.

HCPSS's commitment to equity and access is laudable with a range of programs and supports for special populations. Examples of HCPSS's commitment to equity/access include:

- Digital access for students with disabilities,
- Consistent support through Naviance,
- Beginning to recruit for CTE in middle schools, and
- Enhanced focus on life skills.

These strategies have led to, as one teacher framed it, “a great amount of success.” Particularly around CTE, HCPSS is committed to equity and access for all students by ensuring supports are in place and multiple career pathway options are available and accessible. The Career Advising Framework is designed to support all students with tailored interventions and HCPSS offers multiple specific supports to special populations like students with disabilities.

Strength: Comprehensive High School CTE Offerings

Related to the strengths of equity and access, the CTE ERT observed how comprehensive high schools in HCPSS had a similar level of “buy-in” as compared to the CTE center, the ARL. At Howard High School, students explained, “It makes me want to do work for the classes. Some of the work I don’t want to do, but I have so much respect for my teacher that I will do the work.” In a related comment, one Culinary student said,

“I thought about doing ARL, but I really like cooking. Which one should I choose? It’s amazing I can do culinary at school, even if it messes up my schedule. I like having it here, so I don’t have to travel.”

The CTE programs are consistent across all high schools within HCPSS (with the exception of the # of programs at ARL) and the students shared their commitment to their programs, including how they can still participate in CTE, and stay at their home school. One student shared, “We have to go on a bus, which makes us come to school earlier. So to get to ARL, I would have to come earlier. I know the teachers here because I took the classes here. The teacher is fantastic and personal.” This student expressed strong satisfaction with the CTE offerings and the added benefit of not having to travel to another site. Students exhibiting similar levels of connectedness and buy-in between the comprehensive high schools and the CTE center is notable as this has not frequently been observed during other CTE ERT visits (i.e. students at the comprehensive high schools often report less enthusiasm and connection to their CTE programs in comparison to CTE center students). The comprehensive schools at HCPSS have robust CTE offerings, and the participation numbers, the student and teacher excitement, and IRC pass rates all provide evidence of that.

Strength: Student Feeling of Community Within CTE Programs

Students have a strong sense of autonomy at HCPSS and a strong connection to their CTE program, which is a strength, as that sense of CTE identity, particularly in comprehensive

high schools, can be difficult to achieve. When touring comprehensive high schools, each CTE program had specific signage and content associated with the program, on the walls of the hallways, and within classrooms that were clearly visible to the remaining school. At Howard High School, CTE had its own wing, where one could tell they were where CTE is taught. One student remarked, “it's not a school, it's a place we go to explore our career.” Both CTE teacher and student focus groups spoke highly of some of the traditions in select programs, such as a “culture quilt” in the Finance Academy at River Hill High School, or model rocket launching opportunities at the ARL.

The sense of identity and community extends to the ARL. One teacher explained that students enter the program “from all 13 high schools in the county and leave as really good friends. It's really cool to see.” When asked about the best thing in their respective CTE programs at the ARL, one student shared,

“Relationships that will be coming out of high school. We're in the same space all the time. Whenever we have free time, we're not on our phones. We gather in a circle and just talk to each other.”

The CTE ERT observed the emphasis on both career preparedness and post-secondary success within CTE as a key way that HCPSS helps to foster the CTE identity. The CTE ERT observed in the focus groups that the majority of students expressed their intent to attend a traditional four-year university post-graduation, and therefore, HCPSS intentionally intertwined academic and career-specific references within each CTE program. For example, the intentional word choice of “Academies” within each school to describe the various CTE programs leverages academic terms. Upon completion of their program, CTE students earn distinguishing regalia accessories, which demonstrates something unique to the identity of each CTE program. One CTE teacher explained, “they get a cord [to wear] and they have a graduation at the board of ed. [They have a] formal graduation with internship providers, principals, and parents”. The CTE -specific regalia and graduation further contribute to the CTE-specific identity. The sense of community and identity within the CTE programs are strong and an asset to HCPSS as this approach may contribute to HCPSS's success..

Strength: Focus on “Transferable Skills” Development

While CTE programming is often specific to a career pathway, HCPSS programs emphasize the “transferable skills”. Both CTE teachers and students explained how the skills students are learning in the classroom span multiple industries and will be beneficial for life after graduation. Teachers in focus groups explained “no other classes are preparing students for life the way we do” and that they,

“Have students come back and tell [them] the CTE courses taught them crucial soft skills, like doing a presentation. Our classes force students to go out there and converse with professionals. That's what all of us are doing here.”

Another teacher shared “that we are teaching them how to learn, not what to learn.” There is a strong emphasis on problem-solving, critical thinking skills, and metacognition, which is

the ability to adapt one's problem-solving process to different situations and audiences. Students were also able to articulate their skill acquisition, such as their improved ability to work in teams, collaborate with other students, and deliver presentations. Not only in financial and culinary programs, where skills are applicable broadly in life, but skills like confidence, cooperation and teamwork, communication, and presentation skills were all areas of focus within all CTE programs.

Skill development came up naturally in every student focus group as a benefit to the CTE programming. One student explained,

“[I am learning] skills not taught in regular classes, like to trust others, work in small groups. Now I can work in groups and collaborate on something here.”

Another student affirmed that perspective,

“Since the class is so small, you build this community and you know everyone in the class because you have to work in groups of four in the lab. You have to work with the people in your class, so we develop cooperation skills.”

How well students could name and explain the transferable skills is a testament to how HCPSS has emphasized problem-solving, critical thinking, and metacognition as crucial skills. Students explained they were learning these transferable skills in the classroom and how the skills are beneficial to their success.

Strength: Micromarketing

HCPSS demonstrated multiple examples of how the effectiveness of micromarketing is a strength of the LEA. While participants in the Career Counselor focus group explained how they are leveraging broad school-wide communication campaigns, the CTE ERT observed more discreet and specific examples of how micromarketing is proving to be effective in recruiting CTE students, especially non-traditional students. One CTE teacher shared that their own personalized and targeted outreach in the last few years has increased the number of minority enrollments within his program. Through this personalized approach, this teacher reached students who had not previously shown any interest in CTE courses or programs. With a student body that is accustomed to ignoring mass marketing and exposure to an overabundance of digital engagement, a personalized and intentional strategy such as writing personalized invitations to CTE programs can be particularly powerful. This approach also helped with increasing numbers related to gender diversity. One teacher explained,

“You can’t recreate the rapport these students and teachers have. Teachers always go to bat for students. There’s a focus on building them up. When we had low numbers in gender diversity, [the in-school CTE Lead] would write letters to encourage students. Our numbers have totally flipped – that personal touch has encouraged minorities to join the programs.”

HCPSS is leveraging personalized micromarketing strategy to improve diversity in CTE and teachers claimed it as a particularly effective strategy.

Challenge: School Counseling Disjointed from CTE Programs and Career Advising

The CTE ERT observed a disconnect among CTE programs, school counselors, and the Career Advising team. HCPSS utilizes a robust multi-tiered system of support for their career advising framework called Next Steps Career Advising. Within this framework there are 13 HCPSS Career Readiness Advisors working alongside the 12 Howard County Office of Workforce Development (OWD) Career Coaches to support students with career readiness. Specifically, the role of each career advising partner is as follows: HCPSS focuses on student engagement and curricular alignment, OWD focuses on connection with the local business community and providing additional tier 3 supports, and HCC provides pathway support in alignment with the Monthly Spotlight (Tier 1) and post high school planning (Tier 3).

The design of these roles is such that the Career Readiness Coaches, Career Advisors, and school counselors are all working collaboratively to ensure that a student is college and career ready upon graduation, and connected to appropriate career exploration opportunities starting in middle school. Despite this clear delineation of roles and responsibilities, the CTE ERT observed that, in practice, there seemed to be a disconnect between those responsible for advising and an understanding of CTE programs.

In all teacher focus groups, there was reference to a disconnect between school counselors and what CTE teachers understood to be the best decisions for their CTE students. For example, one teacher referenced that school counselors were recommending courses at HCC instead of within their home school, so students are not completing their CTE program (but still meeting graduation requirements). In some cases that decision directly impacts scholarship opportunities for students. For instance, the Teacher Academy of Maryland program requires students to complete the CTE program in order to obtain specific scholarships. When students take a course at HCC, the scholarship is no longer applicable. ARL teachers shared anecdotes of students claiming school counselors told the students the ARL CTE course was full, which the ARL teacher confirmed was false. In one teacher focus group, there was consensus that school counselors, overall, do not have a full understanding of what CTE offers, especially as it relates to course sequencing. Students attributed course direction and CTE recruitment mostly to CTE teachers rather than counselors. While CTE teachers referenced the disconnect to CTE, it should be noted that school counselors have a challenging workload, having to keep up with every content area, many of which are going through major changes under the *Blueprint*. The amount of information and responsibility put on school counselors is a challenging workload and it is a challenge the CTE ERT has observed in many LEAs across Maryland.

In the Career Counselor focus groups, the CTE ERT observed some coordination within home schools between Career Readiness Advisors and Career Coaches, but little mention of coordination with the school counselors. The CTE ERT noticed limited coordination across schools or among staff in similar roles. The coaches and advisors had a lot of autonomy; however, it was difficult to understand the various roles and how they worked together while

in the focus groups. CTE did not appear to be a main focus for the Career Advisors and Coaches as they are responsible for advising all students based on the framework. While the career advising infrastructure seemed clear in the LEA Brief, the focus group conversations suggest there are some gaps among the career advising staff, students, and CTE teachers. The CTE ERT observed coaches and advisors were disjointed and their work was often duplicative. There is also no career coordinator at the ARL. With no career coordinator at the ARL and limited understanding from school counselors, ARL students may not be getting the full extent of support they need. A teacher at the ARL explained,

“Counselors – I’ve struggled because they still don’t understand what we’re doing here. I’ve gone to each individual school and invite counselors here, but they still don’t know or don’t care about what’s happening here. There is a disconnect about what we’re doing here and what they think we’re doing here. Counselors see ARL in competition with HCC.”

The CTE ERT also observed the Career Counselors continue to rely on traditional marketing strategies, such as email blasts, when communicating with students, with limited success despite the fact they have seen word-of-mouth being the most effective marketing strategy. There is a disconnect among school counselors, career advising, and CTE programs.

Challenge: Staff Under Resourced to Support Special Populations

At the ARL, CTE teachers told the CTE ERT that the amount of time necessary to provide dedicated support to special populations was a barrier. One teacher noted they are “understaffed for our special education and multilingual learner support”, and that communication around supporting these students does not come from the home school. Another teacher explained that the support is taking away from instructional time, which the school system already limits in terms of time students are on campus in the classroom to complete the required coursework hours. Perhaps this challenge is connected with the disconnect previously mentioned, but it should be noted HCPSS has done excellent work solving a plethora of challenges associated with access and equity.

Challenge: CTE Competing with Dual Enrollment

There are many options for students within HCPSS in terms of academic pathways, career exploration opportunities, and extracurriculars, which has created a situation where CTE is in direct competition with these programs, particularly Dual Enrollment. During the Pre-Visit Orientation, the CTE Lead Designee explicitly named “competing priorities” as a challenge. Specifically, the CTE Lead Designee stated that the over-testing at the end of the semester, where AP exams tend to occur at the same as IRC assessments, are having a direct adverse effect on IRC attainment. One student, during a focus group explained, “as a school [we are] very AP orientated and [students] take a lot of AP courses.” The CTE ERT observed that an overwhelming majority of students in the focus group intended to go to college after graduation. Considering that Dual Enrollment (and AP courses) provide access to higher education or opportunities to obtain college credits while still in high school, the CTE ERT observed this as a factor for why students are not prioritizing CTE or IRCs: their mindset is that college is necessary to be successful in life.

During a CTE teacher focus group, CTE teachers expressed the concern that school counselors are guiding students to Dual Enrollment rather than completing their CTE coursework because it works better for that student's schedule. A CTE teacher at a comprehensive high school shared,

“Seniors are now at HCC (Howard Community College) full-time and here part-time. Getting those kids to stay here is a real challenge for us.”

While flexibility is always welcome, when students are no longer in their CTE programs at the high school, they miss out on important opportunities, supports, and cohort collaboration. With the emphasis on college, Dual Enrollment and AP classes are competing directly with CTE, and impacting IRC attainment with assessment fatigue. Considering most students statewide acknowledge they sign up for CTE classes because they appreciate the hands-on learning, assessment fatigue can potentially be a large hurdle, especially because IRCs are optional and will be deprioritized when college credits have been emphasized for so long.

Challenge: Varied IRC Attainment

Holistically, IRC rates within HCPSS are trending toward the 45% goal, but not all CTE programs are earning IRCs at the same rate. In addition, HCPSS uplifted that a high percentage of students that are eligible to take IRCs are not taking them. For example, many programs at the ARL have high pass rates, like Architectural Design at 89% for SY 2024-2025, but the Construction program within the Construction and Development cluster had a rate of 23%. At the comprehensive high schools, for example, Computer Programming scored lower than some of the other CTE programs with 64% at Howard High School and 74% at River Hill High School, compared to other programs like Teacher Academy of Maryland with pass rates of 100% at both schools. The orientation materials mentioned that HCPSS identified 2,100 additional students eligible for IRC assessments that did not take them, while 1,711 IRCs were earned across all of HCPSS in SY 2024-25. This is a challenge and suggests there are opportunities to increase the IRC attainment rates across the district. HCPSS already conducts an annual evaluation of IRC attainment, but as HCPSS gets closer to their targeted 2027-2028 cohort, varied IRC attainment will be expected to be alleviated.

Challenge: Budget Constraints

The CTE ERT noted the effect of budget constraints as a core challenge to CTE programming. The CTE Lead Designee uplifted these themes in the Pre-Visit Orientation. Teachers named budget constraints in CTE focus groups as a challenge. In the LEA Brief, there were several mentions of ongoing budget cuts in the future and its recent impact on staffing and resources, including cuts to both central office and instructional staff. Across HCPSS, the district cut 105 positions, including 2 from the CTE Department. There are ongoing concerns that cuts will result in the inability to “adequately train and prepare staff to prepare their students and implement assessments as we can often only do it outside of the contractual day, which we do not have funding to support, and we cannot require staff to attend.” HCPSS wants to support teachers in ensuring they are preparing their students for passing IRCs; however, HCPSS does not have the funds to compensate the staff for the training after-hours.

Budget constraints are a challenge that limits HCPSS's ability to provide adequate resources towards CTE programming and CTE staff.

Challenge: Effective Marketing Not Being Prioritized

The CTE ERT observed disconnects between the CTE focus group students and the Career Counselor focus group in how CTE students were recruited. In all student focus groups, “word-of-mouth” was the main driver for student interest in CTE programming. As one student explained, “The way CTE is advertised is by word-of-mouth or through teachers.” In other instances a sibling was already in a program, a specific course sparked interest when reviewing the course catalog, or a counselor provided some direction. In a few scenarios, a student referenced CTE programs were advertised at back-to-school night. Teachers referenced how impactful micromarketing strategies were and the Career Counselor focus group also affirmed the importance of a teacher’s reputation on program recruitment. While these are the most effective tools for engagement, the CTE ERT observed word-of-mouth and micromarketing as not being prioritized as an effective strategy and the current communications approach relies on email blasts and more traditional engagement points. Among the Career Readiness Advisors, participants dismissed the use of social media as not being an effective tool based on expert advice, explaining that parents often do not see it as a reliable source; however, social media can be an effective tool in marketing CTE and apprenticeships. The use of effective marketing is not intentionally being centered as part of the recruitment approach for CTE (outside of student ambassadors visiting middle schools or teacher one-offs) and that is limiting the marketing potential.

Challenge: Inequitable Representation in CTE Programs

While HCPSS has a strong commitment to equity and special populations are strongly represented in CTE programming, the CTE ERT observed there might be inequitable enrollment patterns of special populations within CTE programs. The data presented in the LEA Brief demonstrated the percent of students participating from within each subpopulation; however, it did not portray the percentage of each population within CTE programs. Anecdotally, CTE teachers explained that Career Research and Development (CRD) is overly representative of students with disabilities, naming that special education students are a “huge component - majority is self-selected”. In student focus group conversations at the ARL, there were students that uplifted gender imbalance within programs, with one student specifically stating that she “was the only girl- [the] first week was awkward and [I] told myself you will be able to be just fine.” In another program, a student shared,

“I’m one of three girls to join the program, the other two I told to join the program.”

While those students are having a positive CTE experience, it was clear they almost did not pursue that CTE pathway because of the overrepresentation of male students.

The CTE ERT observed during their tour and during student focus groups that there could be enrollment patterns that are not reflective of the community within the schools, particularly regarding racial and ethnic representation. ERT members noticed more diversity with

students at the ARL than at the home schools visited. There was also not significant representation of multilingual learners during the focus groups, so it was unclear the extent that HCPSS centers them in CTE recruiting. As it relates to the data shared in the LEA Brief, the same can be said for teachers; there was a mismatch between the demographic breakdowns and what the CTE ERT observed in practice. The distribution of populations is potentially a limitation within CTE programs at HCPSS. The inequitable representation in CTE programs is a challenge as this is a gap in their commitment equity. That said, HCPSS is making a concerted effort to overcome this challenge with their micromarketing, wrap-around Career Advising framework, and other initiatives.

Challenge: Emphasis on College

Even though HCPSS has a good level of engagement with work-based learning opportunities and career exposure, the CTE ERT observed that much of their structure is set up for students to attend college post-graduation. It is difficult to encourage students to take on something as time-consuming as a High-School-Level Registered Apprenticeship when there is a greater focus on earning college credits through dual enrollment or Advanced Placement courses. It is also a challenge that HCPSS has a college-going culture in the comprehensive high schools and in the ARL that does not make the connection to CTE as a complementary option that also provides the opportunity to earn college credits. This poses a challenge when promoting CTE programming, IRC attainment, and CTE completion as they are all seen as secondary and separate priorities to college-focused activities..

INDICATORS OF EXTERNAL FACTORS AND INFLUENCES

External Strength: County-wide Resources and Partnerships

Throughout the CTE ERT visit, the CTE ERT observed multiple instances of county-wide partnerships and resources to support CTE programming. One of the most prominent displays of this support is the HCPSS Next Step Career Readiness Advising partnership between the Howard County Public School System (HCPSS), the Howard County Office of Workforce Development (OWD), and Howard Community College (HCC). 13 Howard County Career Readiness Advisors work alongside the 12 Office of Workforce Development Career Coaches to support students with career readiness through a multi-tiered system of support framework, described earlier in this report. Specifically, HCPSS focuses on student engagement and curricular alignment, OWD focuses on connection with the local business community and providing additional tier 3 supports, and HCC provides pathway support in alignment with the Monthly Spotlight (Tier 1) and post-high school planning (Tier 3). This dedication of staffing across the county, and alignment of roles between institutions, demonstrates strong county-wide partnerships and commitment of resources.

Another example is the HOCO WORKS program related to the Apprenticeship Maryland Program. This coalition brings together Howard County government, OWD and Howard County's Workforce Development Board, HCC, the Maryland Department of Labor, local employers, and community partners to align goals, remove barriers, and grow high quality youth and registered apprenticeships. Additionally, through HOCO WORKS, employers receive monetary incentives of \$5,000 for each apprentice they take on and up to \$20,000 per workplace, further demonstrating the coordination and commitment across the county to support apprenticeships and the investment of students entering the workforce in high school.

The Emergency Medical Technician Program at the Applications and Research Laboratory (ARL) through the Academy of Health Professions is a partnership with Howard County Fire and Rescue. Howard County Fire and Rescue holds the accreditation and they come in to teach the programs, as well as review the curriculum. The partnership with Fire and Rescue is another example leveraging county-wide resources to support student learning and career exposure and planning. County-wide partnerships are strong and important as they demonstrate cross-sector support, investment, and a commitment of resources.

External Strength: Strong Employer Representation

Howard County's geography places it centrally in the State of Maryland and provides access to many large-scale employers. In addition, its access to infrastructure is strong. The robust Apprenticeship Maryland Program includes a list of 50 participating employers. According to the Maryland Department of Labor, Howard County has over 240 employers, with more than 10 employing 750 or more individuals¹². This provides a strong base for employer engagement and work-based learning opportunities. These employers also represent a range of industries. Participants mentioned many employers during focus groups including,

¹² MD Labor Economic Profile. <https://www.labor.maryland.gov/lmi/emplists/howard.shtml>

the Johns Hopkins Applied Physics Lab and Howard Hospital along with an array of other individual roles such as patent lawyers, engineers, and other professions. The Career Counselor focus group noted their intentional use of micro-career fairs to support career opportunities as well as mega-career fairs like one at Oakland Mills that had 95 vendors and 495 students in attendance. School counselors also told the CTE ERT about how they designated a college fair specifically for Historically Black Colleges and Universities (HBCUs) to make sure students were aware of that pathway. Each school hosts their own career fairs and maintains relationships with employers. As mentioned above, the HOCO Works partnership also demonstrates a strong commitment from the Howard County Office of Workforce Development. The landscape of employers is strong and diverse, which is a strength for HCPSS and offers many opportunities and career connections to students.

External Strength: Connection with Post-Secondary Institutions

An external strength of HCPSS is the strong connection to post-secondary institutions, particularly the relationships that teachers and administrators have with them. For example, Howard Community College (HCC) was referenced multiple times in focus groups as a Dual Enrollment option. One teacher told the CTE ERT that many “seniors are now HCC full-time and here [at the high school] part-time”. Students referenced they are taking classes at HCC to fill course requirements and Career Readiness Advisors named HCC having a dedicated section, “HCC Corner” within their newsletter.. Students and teachers referenced relationships with Community College of Baltimore County and University of Maryland Baltimore County, as well. The intentionality behind bringing in HBCU representation at the Career Fair at the ARL, as referenced in the counselor focus group, is another example of connections to post-secondary institutions. Perhaps this strong connection with post-secondary institutions has led to instances of what the CTE ERT observed as a college atmosphere, referenced earlier in this report. For an LEA with such a strong emphasis on college, multiple connections to post-secondary institutions are a strength.

External Challenge: Accessibility Policies Limiting IRC Attainment

The CTE Lead Designee explained in the Pre-Visit Orientation that the state-approved IRCs, particularly those that tend to be digital in nature, are not being approved by HCPSS administrators because of their robust enforcement of Maryland State Department of Education accessibility policies. The Maryland State Department of Education’s “Equivalent Access for Students with Disabilities” statute (Md. Code, Educ. § 7-910) states, “LEAs are required to establish a process to evaluate digital tools being considered for development or purchase for conformity with the adopted standards. The evaluation process shall include an evaluation of the digital tool for equivalent access and nonvisual access by an employee or a contractor of the LEA.” While their commitment to accessibility is a strength, this statute is limiting HCPSS’s ability to offer additional IRC exam opportunities. The extent of adherence to this Maryland State Department of Education policy varies across LEAs and it should be noted that HCPSS is one of the most advanced LEAs in terms of enforcing it. While some IRC assessment platforms either do not have the resources or interest to make more accessible IRC assessments, some IRC assessments simply cannot be accessible while assessing critical skills. Other LEAs will run into similar challenges as they move forward with adhering to these

policies as the majority of IRC assessments are developed and administered by third-party vendors.¹³

External Challenge: Misalignment Between County Budget Cycle and HCPSS Hiring Needs

The Lead CTE Designee noted during the Pre-Visit Orientation that the Howard County budgeting cycle itself is a challenge. The Lead CTE Designee explained that the budget cycle is later than most neighboring LEAs. Other LEAs have a budgeting process that occurs earlier in the calendar, allowing for teacher positions to be offered earlier in the year. This often results in new hire offers occurring after candidates accept positions with other LEAs. As such, qualified candidates may accept a position at a competing LEA, rather than waiting in uncertainty on what roles may be available in HCPSS once their budget cycle allows for the positions to be posted later in the year. This leads to staffing challenges, such as a limited pool of candidates or vacancies that go unfilled. The external budgeting process is a challenge as it affects the hiring potential for HCPSS staff.

External Challenge: Demand for Work-Based Learning Outpaces Availability

HCPSS is one of the leaders in establishing an effective high school level of a Registered Apprenticeship (HSLRA) system and has a strong Apprenticeship Maryland Program (AMP). In SY 2024-2025, HCPSS had 23 HSLRA completers, 23 Youth Apprenticeships without an IRC, and 36 Youth Apprenticeships with an IRC. In SY 2025-2026, those numbers increased to 43 HSLRAs and 60 Youth Apprenticeships with an IRC. All apprenticeship positions now align with a Registered Apprenticeship Program and all Youth Apprenticeship Programs have an identified IRC associated with it. Despite the strong numbers compared to neighboring LEAs, the student demand for work-based learning opportunities is outpacing the availability of the employer opportunities. In the Pre-Visit Orientation, HCPSS named “Employer Recruitment and Engagement” as the top challenge to apprenticeship with program capacity and staffing as a contributing factor. HCPSS is not alone in facing this challenge as the CTE ERT has observed a similar challenge in every LEA it has visited thus far.

For SY 2024-2025, the waitlist for AMP exceeded more than 300 students for 85 opportunities. Since AMP was a standalone pathway, these students did not necessarily have a CTE program to provide work-based learning experiences if they were not selected for an Apprenticeship role. Workload and capacity constraints limit the amount of time and engagement CTE staff can provide to employers. During focus groups, CTE teachers expressed frustrations around the availability of employment opportunities. For example, one CTE teacher explained that their program’s previous partnership with an employer fell through and that they did not have additional employers readily available to fill the gap of providing onsite clinical experience to students. Other CTE staff members expressed concerns over the limited number of opportunities for students in their respective career fields. The CTE ERT observed stakeholders attributing some of the limitations to staff capacity

¹³ If an approved IRC does have a testing accommodation, the accommodation information is linked on the state-approved list of IRCs: marylandpublicschools.org/about/pages/approved-credentials.aspx.



to recruit new employers, student transportation to workplaces and related instruction, the time and expense commitment from an employer perspective, and the timing of the apprenticeship program as barriers for additional employment participation. There is an eagerness of students to obtain work-based learning opportunities, but the availability of these opportunities is limited. HCPSS is not alone in facing this challenge, but the CTE ERT has observed that HCPSS has made great strides in establishing a strong foundation for expanding HSLRA.

POTENTIAL NEXT STEPS

Although the CTE ERT has presented its observations in this report, these observations and Potential Next Steps are preliminary. The purposes of Phase 1 of the CTE ERT are to establish a baseline for progress toward *Blueprint* goals across Maryland and identify key challenges. The Potential Next Steps are areas that this LEA may look for improvement in. These Potential Next Steps are not a directive, but opportunities of improvement to explore. They are meant to be the beginning of a conversation that will continue, and for this reason, these Potential Next Steps do not comprehensively address the challenges the CTE ERT notes in this report.

Further Leverage Data to Inform Decisions

HCPSS's commitment to equity and leveraging data is strong, and HCPSS can deepen that commitment by further collecting, analyzing, and acting upon data within each CTE program. This can be used to ensure access and enrollment are representative of both the school and the county. Building off the robust data-focus in place, this may include, for example, providing targeted professional development across CTE programming to collect and understand data, disaggregate it, or institute new infrastructure to better capture additional nuance. Once that data is better understood, HCPSS can use this information to implement strategies to provide better representation across programs and ensure that certain programs do not overrepresent specific subpopulations. This will also identify where there are opportunities to enhance recruitment and retention strategies for more equitable participation, especially for special populations that are not as well represented.

Once HCPSS collects the baseline data and understands the barriers, as it has begun to do with IRC assessments, it can build upon its commitment to equity to better distribute access and enrollment of CTE programs to reflect individual and county-wide demographics. One CTE teacher shared that personalized and targeted outreach in the last few years has increased the number of minority enrollments within their program. HCPSS can explore a more intentional approach and expand on its micromarketing strategy, leveraging data to ensure a more representative distribution of demographics across programs within each school. Moreover, the CTE ERT learned during the Career Counselor focus group that counseling staff seemed to know what the most effective marketing strategies were, but seemed to stick to mass communications and other ineffective strategies. Leveraging data to inform decisions like this can provide evidence to support the best path forward.

Consider Professional Development Around Career Advising

The disconnect among the school counselors, Career Advising, and CTE programs suggests there is an opportunity for professional development for school counselors around CTE offerings. By further offering professional development in career planning, all staff, especially school counselors, can better understand and center a student's career pathway and support them in their learning journey. HCPSS can also explore how to further integrate career advising into core classes to ensure a greater understanding and alignment of a student's career interests across the school system. As mentioned previously with their multi-tiered career advising framework, HCPSS has begun to implement career advising across the

curriculum. HCPSS can deepen the integration of longer-term, career advising throughout curriculum and counseling by creating more collaboration pathways between school counselors and CTE programs. When there is a better understanding of CTE, career advising, and focus on IRC attainment, counselors will be less likely to treat CTE as continued career exploration. There is more intention in course choice and a greater likelihood of students completing a CTE pathway and earning an IRC if HCPSS targets school counseling as an area of improvement.

- Montgomery County Public Schools (MCPS) and their career advising program, MOCOCAP, may be a potential collaborator as MCPS has created the infrastructure to integrate career advising across the curriculum.

Continue to Center CTE Teacher Voices in Decision-Making

Across Maryland, the CTE ERT has observed a best practice is incorporating CTE teacher voices into decision-making rolled out by the Central Office within the LEA. The CTE ERT recognized how HCPSS has incorporated CTE teacher perspective in many decisions, especially at the Applications and Research Lab. By further centering their voices, this can help alleviate some of the disconnects with guidance, identify creative solutions to budget challenges, and tap their insights to support micromarketing. When teachers have more input in decision-making that impacts them, it is possible that their overall buy-in for CTE increases, and likely that student experience is better incorporated in decisions. Because teachers have a strong sense of students' day-to-day experience, their perspective is invaluable when it comes to decision-making. HCPSS leadership have faced nuanced challenges with budget, staffing, and several other factors, but continuing to incorporate teacher perspectives in decision-making will benefit all HCPSS stakeholders.

Consider Resources for Career Readiness Advising and Career Coaching

While the foundational framework around the HCPSS Next Steps program is strong, there are opportunities to strengthen the implementation by providing centralized resources and peer learning opportunities for Career Readiness Advisors and Career Coaches. The CTE ERT observed how advisors and coaches were sometimes disjointed and had duplicative workloads, so investigating how these resources are spent to avoid duplicative work should be a priority. This may begin with regular meetings with advisors and coaches to revisit roles and responsibilities. It may lead to exploring opportunities for the Next Steps team to obtain career advising professional development as it relates to coursework and CTE pathways requirements, to better understand completion requirements, and ensure students are fully aware of course requirements and IRCs. HCPSS can also connect the Career Advising team more intentionally to student coursework and teachers. This may potentially create a more unified and shared HCPSS voice for students so they are hearing similar messaging from multiple sources of information within their schools. In addition, there could be a more prominent emphasis on career advising within the ARL. Another opportunity relates to sharing best practices and creating more peer learning and centralized resources for those in career advising positions. This could include, for example, professional learning communities for like positions, shared best practices, and a centralized database of employment

opportunities or resources for students. Shared employer lists or job boards, in conjunction with better alignment to the Apprenticeship Maryland Program may also help expand work-based learning opportunities. There are ways to streamline career advising resources across the LEA and HCPSS has made great strides in supporting their Career Coaches and Career Readiness Advisors.

Strategize Creative Ways to Address Conflicts with Dual Enrollment and Emphasis on College

A challenge in HCPSS is CTE's competition with Dual Enrollment. The concept of assessment fatigue or challenges with scheduling may be important hurdles for CTE enrollment, completion, and IRC attainment. HCPSS should explore creative ways to mitigate some of these challenges, and potentially engage both students and teachers in the process to identify solutions, particularly as it relates to exam timing, access, and availability of CTE classes. There are also opportunities to launch a more intentional messaging campaign around CTE programs as not only an alternative pathway to earning college courses, but as complementary options. In addition to CTE programs, improving the messaging around the value of IRCs for post-secondary opportunities, regardless of post-graduation plans, would be beneficial. One way to address competition with Dual Enrollment is to have CTE teachers that have the required Masters-level credentials explore how they can become accredited and approved to provide instructional material that satisfies the college-level requirements at HCC. With that accreditation and approval, CTE students can obtain that same dual enrollment credit without having to commute to HCC and exit their CTE program. Some of this can be done at select schools as an exploratory initiative, and HCPSS can scale best practices across schools. HCPSS can brainstorm potential options to address some of the challenges that come from competing Dual Enrollment and AP.

Increase IRC Attainment in Target CTE Programs

HCPSS already has positive-trending IRC attainment rates; however, they should continue to explore how to improve IRC attainment rates for the programs that have lower attainment rates, such as Construction or Cybersecurity Networking. HCPSS has already begun to do this by conducting an analysis of IRC assessments and have developed a solid baseline to work off of. Moving forward, HCPSS can analyze best practices to replicate when reviewing why other programs, such as Project Lead the Way, and Architectural Design, have such high attainment rates. HCPSS should also revisit the IRC attainment rates and process to account for the CTE IRC Policy. HCPSS has made great strides in improving IRC attainment, especially for a district this large, but there is room for improvement in a few targeted CTE programs.

Explore Regional Professional Learning Communities

Building off of the already strong relationships between HCPSS and neighboring LEAs, HCPSS can explore developing Professional Learning Communities (PLCs) with neighboring counties, particularly for CTE teachers in similar subject areas. IRC accessibility is a challenge for all LEAs and HCPSS is at the forefront of identifying this challenge. The CTE ERT recommends that HCPSS continues to document the specific IRCs that are limited by current policies for MSDE awareness and engage other LEAs on best practices for work-

rounds or other creative solutions. HCPSS has created strong collaboration pathways so teachers have peers, both within and outside the LEA, they can work with. Finding more collaboration opportunities, where CTE teachers experiencing similar external constraints can learn from each other, share strategies, analyze data, and set common goals to advance student outcomes. This can be done across Central Maryland and span multiple subject areas. The potential creation of a Central Maryland PLC should be explored because teachers want more opportunities to collaborate with peers.

Consider Additional Micromarketing Messaging Campaigns

Communication with parents remains strong, but social media, intentional word-of-mouth campaigns, and other strategies proven to be effective appear to be an underutilized resource. The CTE-department is beginning to utilize social media; however, HCPSS can further explore how social media can support creating student awareness and excitement for select CTE programs to complement word-of-mouth marketing. Providing centralized tools and some guidance for school-based CTE social media across programs can also be beneficial. There are opportunities to build upon the existing word-of-mouth success and create additional micromarketing messaging campaigns to maximize communication goals. CTE teachers told the CTE ERT how successful the letter-writing campaign was and that may be a useful strategy to use moving forward. HCPSS should also be commended for having such a strong alumni network that provides evidence to students for what kind of success they can potentially achieve because they represent a similar background as them. HCPSS has made great strides in developing strong messaging campaigns and should continue exploring marketing and messaging campaigns that work.

Leverage CTE Teachers As Peer Recruiters

While the county budget cycle provides challenges in a hiring timeline, HCPSS can continue to leverage their current CTE staff to be advocates for their programs and for CTE in general. HCPSS can explore how to further leverage the CTE teachers to recruit future staff and build a pipeline of qualified and engaging staff for future vacancies for when those positions become available. CTE teachers at the ARL spoke about how highly prestigious the Applications and Research Lab is across the state and that should be a point Howard County should be proud to continue leveraging as a recruitment tool.

Continue Leveraging Local Workforce Development Board (LWDB)

LEA CTE connection to the LWDB is critical in ensuring progress toward achieving the *Blueprint's* 45% goal. HCPSS has proven to have a strong connection to the OWD and their LWDB and should continue leveraging that connection to expand employer partnerships and other resources within the community.

Explore Technical Assistance with MSDE, the Maryland Department of Labor (MD Labor), and the CTE Committee in Meeting the Blueprint's 45% Goal.

HCPSS is already prioritizing how to increase its progress in meeting the *Blueprint's* 45% goal. HCPSS has a strong Apprenticeship Maryland Program and is instituting best practices

around aligning the offered positions with high school level Registered Apprenticeships, as evidenced by the increasing numbers of HSLRAs from SY 2024-2025 and the strategic focus on IRC attainment within HCPSS. They are one of the leaders in the state in HSLRA numbers and should continue to focus on expanding opportunities and building off of the best practices they are already instituting. In order to achieve the *Blueprint's* 45% goal, establishing and expanding HSLRAs should continue to remain one of HCPSS's priorities. HCPSS should continue to work with MD Labor's Apprenticeship Navigator to ensure employers understand scheduling options for students, as well as accessing available incentives such as grants and tax credits.¹⁴ In addition to the programmatic efforts already underway, HCPSS can consider some additional best practices as they continue to prioritize expanding HSLRAs. For example:

- Several LEAs employ interns and youth apprentices and may consider working with MD Labor to become Registered Apprenticeship sponsors in order to convert these WBL opportunities to high school level Registered Apprenticeships.
- Somerset County Public Schools approved a new policy to allow students to leave school early for an apprenticeship or employment: "Co-Operative Work" is for students who have time in their schedule to be employed at any part-time employer and "Directive Work" is for students who finished their CTE programs and are working in a related field.

At the time of the visit, HCPSS's IRC completion rate of 38.6% is laudable and one of the highest among CTE ERT visits to date; however, it should be noted that all LEAs' true IRC attainment rate was difficult to quantify given it is based on a prior approved IRC list. Nevertheless, HCPSS can seek technical assistance from MSDE and similar LEAs in strategies to further expand IRC attainment, such as:

- Dorchester County Public Schools conducts annual audits to evaluate which programs to expand, sunset, or start, which has created a responsive system that adapts to evolving students' needs and interests and industry trends.
- Somerset County Public Schools had posters in the hallways of the CTE Center identifying IRCs tied to various programs and the IRCs' benefits in the industry.
- Worcester County Public Schools administrators conduct a thorough data analysis of Labor Market Information before the start of the school year with all the administrators, staff, and teachers so they can analyze what jobs, skills, and IRCs are in-demand regionally.

The CTE Committee recognizes that policies defining the 45% goal were not issued until December 2024, and this CTE ERT visit took place in October 2025, so all of those implementing this work and the partnerships required are still in the early stages of development. Exploring technical assistance with MSDE, MD Labor, and the CTE Committee will prove to be a useful addition to meeting the 45% goal.

¹⁴ Maryland Department of Labor. (2026). *Current solicitations*. <https://tinyurl.com/b95w6exy>

Conclusion

This Phase I visit to Howard County Public School System (HCPSS) was conducted to assess progress in strengthening CTE program quality, alignment to labor market demand, student access and equity, and *Blueprint* implementation of state policy priorities. The visit provided an opportunity to engage with leadership, educators, students, and partners to better understand current practices, celebrate successes, and identify areas for continued growth. The CTE Committee appreciates the transparency, preparation, and collaboration demonstrated throughout the visit process.

The CTE Committee commends HCPSS for its clear commitment to advancing high-quality CTE programs and for the strengths observed during the visit. At the same time, the CTE Committee recognizes that challenges remain. Some of these reflect broader external factors - including evolving policy requirements, workforce dynamics, resource constraints, data system transitions, and shifting student needs - that influence local implementation. Continued focus on strategic alignment, program quality, and equitable student outcomes will be essential as the system moves forward.

As implementation of CTE ERT Phase 2 is currently paused, the CTE Committee will be taking insights from Phase 1 visits to inform a longer-term strategy for the CTE ERT program. The CTE Committee will be working closely with the AIB, MSDE, and relevant stakeholders to make an informed recommendation regarding the structure and timelines for resuming CTE ERT visits in future school years.

We look forward to continued partnership as HCPSS advances this important work and we encourage HCPSS to reach out to CTE Committee staff for any questions or technical assistance.

Appendix Guide

- A. LEA Brief
- B. School Visit Agenda
- C. Focus Group Protocol and Interview Questions
- D. Glossary and Acronym Guide

Appendix A | LEA Data Brief

LOCAL EDUCATION AGENCY (LEA) BRIEF

CTE Expert Review Team Visit

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Comprehensive High Schools with CTE

- Atholton High School
- Centennial High School
- Glenelg High School
- Guilford Park High School
- Hammond High School
- Howard High School
- Long Reach High School
- Marriotts Ridge High School
- Mount Hebron High School
- Oakland Mills High School
- Reservoir High School
- River Hill High School
- Wilde Lake High School

LEA CTE Center

- Applications and Research Laboratory (ARL)

CTE ERT Visit

Date: October 22, 2025

Schools: Howard High School, River Hill High School, and Applications and Research Lab



HCPSS CTE Data (2024-2025 SY Data)

	HCPSS	School #1- Howard	School #2 River Hill	School #3 ARL
Total Enrollment (# of all HS students)	18827	1511	1402	1476
Total Enrollment (# of all graduating students)	4268	415	377	499
CTE Participation Rate ¹⁵ (# and % of all graduating students)	2668; 62.5%			
CTE Concentration Rate ¹⁶ (# and % of all graduating students)	2170; 50.8%	141; 33.9%	106, 28.1%	499, 100%
CTE Completers Rate ¹⁷ (# and % of all graduating students)	1264; 29.6%	66; 15.9%	48, 12.7%	499, 100%
Dual Enrollment Participants ¹⁸ (# of all graduating students)	6,407 courses taken by 3,477 HCPSS students gr. 8-12 for SY24-25	783 courses taken by 379 HoHS students gr. 9-12 for SY 24-25	603 classes taken by 411 RHHS students gr. 9-12 for SY24-25	N/A
Dual Enrollment Completers ¹⁹ (# of all graduating students)	6,209 courses taken by 3,418 HCPSS students gr. 8-12 for SY	735 classes taken by 361 HoHS students gr. 9-12 for SY 24-25	581 classes taken by 404 RHHS students gr. 9-12 for SY 24-25	N/A
Work-Based Learning Participants ²⁰ (# of all graduating students)	335+	14	21	50+
Apprenticeship Participants ²¹ (# of all HS students)	RA: 25 YA: 23 YA+IRC: 36	RA: 2 YA: 2 YA+IRC: 6	RA: 2 YA: 0 YA+IRC: 2	RA: 25 YA: 23 YA+IRC: N/A
Apprenticeship Participants (# of all graduating students)	RA: 25 YA: 23 YA+IRC: 36	RA: 2 YA: 2 YA+IRC: 6	RA: 2 YA: 0 YA+IRC: 2	RA: 25 YA: 23 YA+IRC: N/A

Apprenticeship Completers ²² (# of graduating students)	RA: 23 YA:23 YA+IRC: 35	RA: 2 YA: 2 YA+IRC: 6	RA: 2 YA: 0 YA+IRC: 2	RA: 23 YA:23 YA+IRC: N/A
IRC Completion Rate ²³ (# and % of all graduating students)	515; 12.1%	0, <1%	39; 10.3%	376; 75.3%
Progress Towards 45% Goal²⁴	538/4268: 12.6%			

Additional Apprenticeship Data:

- SY 24-25
- 8 Career Clusters
- 22 Occupations
- 44 Employers

SY 25-26

¹⁵ CTE Participants are students completing not less than one credit in a MSDE-approved CTE program of study.

¹⁶ CTE Concentrators are students who have completed at least two courses and are enrolled in a third course in a single MSDE-approved CTE program of study.

¹⁷ CTE Completers are students who meet all requirements in a state-approved CTE program of study, typically three or four courses.

¹⁸ Participation is defined as the number of all graduating students participating in dual enrollment (does not count towards the 45% goal unless they earn an IRC).

¹⁹ Dual enrollment completers is defined as the number of all graduating students who earned college credit through dual enrollment.

²⁰ Work-based learning includes internships, job shadowing, and other work-based experiences excluding apprenticeships.

²¹ Participation is defined as the number of all high school or graduating students who have participated in the high school portion of a registered apprenticeship (RA), an AMP youth apprenticeship (YA), or a Youth Apprenticeship with an attached IRC.

²² Completion is defined as the number of all graduating students who have completed the high school level of a Registered Apprenticeship (RA), have completed an AMP youth apprenticeship (YA) without an IRC (YA completers who don't earn an IRC will not count towards 45% goal), or both an AMP youth apprenticeship (YA) and an IRC.

²³ Defined as the percentage of all graduating students who have earned an IRC ([as defined by the CTE Committee](#)).

²⁴ This metric is calculated by adding together the Apprenticeship Completion Rate (RA completers plus YA completers who also earn an IRC) and the IRC Completion Rate (based on draft guidance from the CTE Committee), divided by the total number of graduating students.

RA - 43
 YA - 0
 YA+IRC - 60

LEA High School Student Demographics

	Maryland	HCPSS
District Student Demographics (Enrollment data for 2025) ²⁵	278238	18428
% Asian	7%	24%
% American Indian / Alaska Native	<1%	<1%
% African American	33%	26%
% Hispanic	23%	14%
% Native Hawaiian / Other Pacific Islander	<1%	<1%
% Two or More Races	5%	6%
% White	32%	29%
% Students with Disabilities	11%	9.4%
# of Multi-Lingual Learners	11%	5%
% Free and Reduced Meals (FARMS)	49%	30%
Instructional Staff Per 1,000 Pupils	70.8	76

²⁵ This is the most recent information according to the The Maryland Report Card reportcard.msde.maryland.gov/

LEA Teacher Demographics

	Maryland	HCPSS
District Teacher Demographics (2024-2025) ²⁶	63,736	4298
% Asian	0.20%	5.6%
% American Indian / Alaska Native	4.80%	0.2%
% African American	21.40%	11.3%
% Hispanic	4.90%	3.5%
% Native Hawaiian / Other Pacific Islander	0.50%	0%
% Two or More Races	1.70%	2.6%
% White	66.60%	76.7%
% Female	76.80%	76.7%
% Male	23.10%	23.1%
Average Length of Service (Years)	12.5 Years	15.2 Years
New Hires (#)	5,317	265
Teacher Retention Rates (%)	90.60%	91%
National Board Certified Teachers	2,279	235

LEA CTE Offerings

CTE Program Enrollment 2024-2025 SY

Program Name (Academy)	Total Enrollment	Overenrolled or Underenrolled?	Number of Students on Waitlist
Accounting Academy	1407	N/A	N/A
Agricultural Science	30	Underenrolled	N/A
Animation and Interactive Media	90	N/A	N/A
Apprenticeship Maryland	85	N/A	N/A - over 300 applications were received for limited

²⁶ This is the most recent information according to the Educator Dashboard marylandpublicschools.org/about/Pages/DEE/educator-dashboard.aspx, but LEAs are welcome to make revisions

			positions available
Architectural Design	47	Overenrolled	49
Automotive Technology	96	N/A	N/A
Biotechnology	107	Overenrolled	40
Business Management	1456	N/A	N/A
Career Research and Development	818	N/A	N/A
Computer Programming	936	N/A	N/A
Computer Science	713	N/A	N/A
Construction	35	N/A	N/A
Culinary Science	261	N/A	N/A
Cybersecurity Networking	181	N/A	N/A
Finance	88	N/A	17
Graphic Design	48	N/A	N/A
Health Professions	383	Overenrolled	85
HVAC	30	Overenrolled	22
JROTC Air Force	89	N/A	N/A
JROTC Army	206	Overenrolled at one site (AHS)	N/A
Marketing	1244	N/A	N/A
Project Lead the Way-Aerospace	47	Overenrolled	36
Project Lead the Way-Civil Engineering	42	N/A	2
Project Lead the Way- Engineering	752	N/A	N/A

Teacher Academy of MD	641	N/A	N/A
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Progress Toward the 45% Goal:

What progress are you projecting toward meeting the 45% goal for your district in the 2025-2026 SY? By SY 2026-2027? By SY 2030-2031?

SY2024-25 IRC / Apprenticeship

Freshmen - 312

Sophomores - 350

Juniors - 460

Seniors -589

SY2025-26 - Projected # of Seniors graduating with an IRC or Registered Apprenticeship: 25% - 35%

SY2030-31 - Projected # of seniors graduating with an IRC or Registered Apprenticeship:

We are currently projected to reach the 45% goal by SY2030-31 but there are several obstacles that may prohibit us from reaching the overall goal

HCPSS is making steady progress towards meeting the 45% goal by SY2030-31. We have backwards mapped approved IRCs with applicable programs and courses that we offer, and we are increasing the number of IRCs earned annually.

If we are able to assess all students applicable for IRC attainment we would be close to 45% within the next two years, but various obstacles may prohibit us from reaching the identified goal due to systematic (LEA specific) and administrative (MSDE, CTE Committee, AIB, etc.) guidance, processes and requirements as they seem to be consistently changing. Ideally, we need all specified guidance and requirements in place by SY2027-28 for the SY2031 graduating cohort so that implementation plans can be solidified and firmly in place.

What are your plans for expanding Registered Apprenticeships in your LEA?

HCPSS currently leads the state in the number of students participating in school-to-apprenticeship opportunities through the Apprenticeship Maryland Program, providing a strong foundation to continue to expand Registered Apprenticeship (RA) opportunities. Our next phase of growth focuses on deepening partnerships with existing sponsors such as Howard Community College and IEC Chesapeake while also working closely with the Maryland Department of Labor to register new occupations and transition current youth apprenticeship roles into fully registered programs.

We plan to expand RA pathways beyond our current offerings in

- Construction and development (electrical, HVAC, plumbing, low voltage/telecommunications, pool technician),
- Information technology (IT and cybersecurity),

- Hospitality (chef and restaurant management),
- Human services (childcare).

Future growth areas include:

- Healthcare (CNA to LPN)
- Welding
- Teacher apprenticeship (new approved MSDE sponsored program)

These will align with workforce demand and support Maryland's broader Career Connected Learning goals. By building new partnerships, increasing employer participation, and developing relationships with additional related instruction providers, we will continue to scale registered apprenticeship opportunities that lead directly to high-demand, high-wage careers.

While our overall goal is to continue to expand registered apprenticeship opportunities for HCPSS students. The AMP program is aligned with the CTE committee's definitions for apprenticeship by ensuring that 100% of the students participating either complete the high school level of a registered apprenticeship/ school to apprenticeship and/or earn an industry recognized credential.

Program Plans for Future

Are there any new programs you plan on adding to your current programming within the next 2 school years? Why are you adding the program(s)?

We do not currently have any plans to add any new programs within the next two years. With the new CTE Programs of Study (POS) having to be implemented with the start of the SY2027-28 school year, our focus will need to be that we are in compliance with all new standards and requirements that are associated with the new POS, as plans must be in place by the time the SY2027-28 catalog comes out, which is next October. Additionally, with the new POS no longer including Career, Research and Development (CRD) or the Apprenticeship Maryland Program (AMP), a major focus will be on ensuring that we are able to continue to provide apprenticeship opportunities for students at current levels that also allow for growth and expansion, while also identifying options and opportunities through the new Career Connected Learning (CCL) model for students that have traditionally utilized CRD as their completer. With budget and staffing issues providing extreme barriers, our focus must be to support students through the new MSDE - CTE models and requirements that seem to be ever evolving and changing.

Are there any current programs you plan on expanding upon within the next 2 school years? Why are you expanding the program(s)?

With the HCPSS having a unique CTE structure where the same 11 Career Academies are offered at all high schools, and 13 Career Academies are offered at a centralized CTE Center location, The Applications and Research Laboratory (ARL), there are consistent waitlists that exist for several programs that are only offered at the ARL.

With the ARL currently undergoing renovations that will yield an additional 8 classrooms, there are plans to expand several programs that have had consistent waitlists over the past four years, which include Architectural Design, The Academy of Health Professions, and Graphic Design. Given the current budget situation for the HCPSS, we are also in the process of developing a structured plan of expanding additional programs over the next several years, and these programs may include HVACR, the Academy of Finance, Biotechnology, and potential further expansion to the Academy of Health Professions.

As a note, until we are able to identify all of the needed changes that will have to coincide with the new CTE Programs of Study (POS), we will not be able to make any finalized decisions regarding expansion.

Are there any programs you are eliminating/removing within the next 2 school years? Why are you eliminating/removing the program(s)?

We do not currently plan on eliminating or removing any programs within the next two school years unless required by the new CTE - Programs of Study (POS).

Enrollment Practices

How do students enroll in CTE programs?

All high school students are able to select / indicate CTE courses during our annual course selection process that occurs in December and January.

For the 11 CTE programs that are offered at all high schools, all students are generally able to be enrolled as waitlists are typically not an issue given that courses can run at any period within the day at the high school and multiple sections may run where applicable. There are times, however, where CTE program related courses are not able to run due to a lack of student interest and difficult decisions having to be made regarding staff schedules given limited staffing at all schools. This will continue to occur, and potentially increase, given current budget restrictions and funding. When courses at high schools are not able to run, we have alternative, equivalent options that are available through Dual Enrollment at Howard Community College (HCC) for most courses where this is a potential issue.

For the 13 CTE programs that are offered at the ARL only, which are only available to Juniors and Seniors, sophomore students select / express interest during the course selection window for their junior year. Where interest exceeds available enrollment seats, which is the majority of programs, students are enrolled through a randomized lottery selection process and wait lists are generated. There are alternative options for several ARL programs that are available through HCC or through Apprenticeship, but there are situations where students are not able to take CTE courses or Programs of interest. For juniors that are placed within programs at the ARL, they are automatically enrolled within the next set of courses sequentially for their senior year.

For Apprenticeship, interested students must complete an application process during their junior year where, if selected, they then interview with our employer partners to hopefully

earn a job offer. With limited positions available, the number of student applications far exceeds the number of positions that are available across all industries.

Are all CTE Programs offered to all students?

Yes, all CTE Programs are available to all students. This does not ensure enrollment, however, as for programs at the ARL there are limited seats available.

Can a student participate in a CTE Program at another school?

With all 11 of the same CTE Programs being offered at all high schools, students are not permitted to attend a CTE Program at another school, even in the situation where a course, or program as a whole, is not running at their school during a given school year. The only exception to this would be the JROTC Program, which is only located at three schools, and students are permitted to apply and attend a school for the purpose of enrolling in JROTC when their districted home school does not offer JROTC. For other CTE Programs, such as the Teacher Academy of Maryland (TAM), when a course or program as a whole is not running within any given year, students generally have HCC as an alternative option equivalent.

Program Design

What are some best practices from CTE in your LEA that you think are worth sharing with other CTE programs across the state?

Industry Recognized Credential access and expansion for all students.

We looked at all CTE Career Academies and the associated courses and identified each course where an IRC would be applicable, which included multiple courses at all high schools and almost every program at the ARL. This has allowed for all students, Freshmen through seniors, to earn IRCs. By treating each graduating class as a cohort, and not just as seniors, we are working towards each cohort's 45% attainment when they enter high school as freshmen.

We utilize Perkins funding to license all schools and locations that have been identified with relevant IRCs for the CTE Programs / Courses that are offered and running at those locations.

After our first year of IRC Assessment implementation, SY2023-24, we looked at our baseline data to identify where our curriculums were not adequately preparing students to find success and we completed curriculum revisions where needed. This resulted in an increase during our second year of implementation and will continue to be ongoing as various IRC Assessments change in the coming years.

Information and Awareness

We consistently present and/or provide information and awareness sessions for all relevant internal staff (school counseling, administration, CTE instructional staff, liaisons, etc.) so that there is understanding around the relevance and importance of students earning IRCs. We

also share recorded webinars with the greater HCPSS parent and student community for information, awareness and interest.

We added a “Careers” course in MS that is required for all students and are working closely with our Career Counseling staff (Career Readiness Advisors and Career Coaches) to ensure that all students are made aware of opportunities through CTE available in high school, and the associated career pathways.

Instructional Support

Utilizing Perkins funding we create an Instructional Support Plan for all CTE staff where any teacher that is new, non-tenured, provisional, or teaching something for the first time is partnered with a mentor teacher. These pairings meet, at minimum, once a month to co-plan, discuss best practices and for the mentor to provide the mentee support regarding instruction or other systematic requirements or processes. The Instructional Support Plan is also for teachers of like subjects or contents to meet regularly to collaborate and/or co-plan and share best practices. For individual teachers that are the only teacher of their subject matter or content within the district (which is specific to the ARL) the Instructional Support Plan provides them the opportunity to take sub days to visit “like” teachers of the same content within other districts.

Utilizing Perkins funding we also created “Content POC” positions for identified areas where teachers are the only content teacher of their kind within our buildings. The Content POCs are responsible for providing regular communications and check-ins with their groups and they develop and lead all content professional learning sessions that are scheduled and/or available throughout the school year.

Supporting Student

All students have the option to take and earn their required CSET credit for graduation in MS, thus creating additional available space in their HS schedule for expanded exploration of other topics and potential career pathways. There has been an increase in the number of students doing this over the past two years, but some still elect to take World Language in middle school as a student does not have the option to take both.

Providing resources or ML and Students with Disabilities has been a primary focus of systemwide professional learning over the past two years.

Apprenticeship

All apprenticeship positions align with a Registered Apprenticeship Program and/or all Youth Apprenticeship Programs have an identified IRC associated.

Career Counseling

HCPSS has developed a multitiered system of support model (MTSS) for the implementation of career counseling in alignment with Blueprint requirements. Tier one supports ensures that all students receive individualized career counseling through a combination of three anchors.

1. The first is curriculum-embedded programming designed to foster self-awareness and career awareness for all students leveraging Naviance as our CCR platform.
2. The second is our Monthly Spotlight, an initiative designed to increase career awareness and intentionally connect students to specific career clusters based on their strengths and interests.
3. The third is the CRA-led high school careers team, a multidisciplinary team of school staff and leadership that develops career-connected initiatives to meet the needs of the school community.

In addition to the anchors listed above, tier two and three supports are deployed based on data-driven HCPSS district priorities. Students in danger of not meeting the CCR indicator or those who have not met the indicator by 10th grade are connected with additional supports that are connected to their future goals and aspirations. In addition, data-driven outreach efforts to support vertical articulation for students in danger of not meeting the CCR indicator begin in middle school and continue through the full transition to high school, including supplemental summer programming provided by the CRA's. Students who are approaching graduation without a documented post high school plan receive intentional engagement from our CCR partners (Howard Community College and Howard County Office of Workforce Development) to make direct connections with post high school pathways.

LEA Support for Schools

What Challenges does your LEA face in reaching the 45% goal?

Challenges related to IRCs

"Buy In" within the community as AP courses and pathways are perceived by many as the most appropriate pathways for success and CTE is often still considered "the trades." With the majority of our graduating seniors attending 4-year colleges there is a larger focus on AP and Dual Enrollment for many of our students and families.

IRC Assessments need to be given at the end of courses, which is typically in May / June, and for many of our students they are already taking a large number of assessments during this window (AP Exams, state mandated assessments, Final exams for seniors). It is often difficult to implement IRC Assessments for all applicable students due to conflicts and "over testing" as some students do not have interest in earning an IRC and we cannot require that they take an IRC Assessment when it occurs outside of the class period.

While IRCs and the 45% are required by Blueprint, they are not a part of mandated testing in the eyes of the Assessment Department and are therefore not included with their planning and implementation processes. The focus of our Assessment department is on all state mandated assessments and CCR, and IRC's are not included within either of those areas.

Budget-related issues and constraints have reduced staffing in all areas, including Central Office and with instructional staff, and as budget issues will continue for the next several years at a minimum, we will continue to have obstacles and barriers with the planning and implementation of IRC Assessments. This includes not having funding to

adequately train and prepare staff to prepare their students and implement assessments as we can often only do it outside of the contractual day, which we do not have funding to support, and we cannot require staff to attend.

The AA Accessibility Law that is in place for all Digital Tools often provides barriers for required digital resources needed to prepare students, or for them to be assessed. There are actually approved IRCs that are on the list that we are still trying to get approval to implement due to the fact that the Digital Tools that are required for implementation are not AA accessible. There are multiple aspects of both laws, Blueprint and AA Accessibility, that contradict one another or make it difficult to meet the requirements of one when the requirements of the other create a barrier.

With CTE being an elective content area, there are also often scheduling conflicts for students where they are not able to access our programs or courses due to having to focus on graduation requirements. This is most often the case for our students that struggle academically and could benefit the most from CTE, but graduation requirements always take precedence over career exposure and exploration.

Available seats for programs that are offered at the ARL compared to levels of interest. Budget, staffing and facility constraints will continue to prohibit potential problem solving options.

Challenges related to Apprenticeship

Many students do not have a drivers license and/or transportation which creates a barrier to participation in the program.

Limited funding for related instruction often restricts the number of available apprenticeship opportunities and can place financial strain on both schools and employers.

Employers / Partners

How is CTE financial support structured within the LEA?

The financial structure of CTE in the HCPSS is primarily focused within staffing (which includes both central office based leadership staff and school based instructional staff), the operating portion of the budget that is dedicated to CTE, and annual grant funds or competitive grants such as Perkins and/or Perkins Reserve.

Currently, the HCPSS has the smallest central office staff within Maryland when based on student enrollment, which creates capacity issues. As a positive, with the current state of our overall budget, both as a district and within the state, our dedicated CTE operating budget has been impacted minimally. With continuous staffing cuts being made annually as a result of budget impacts, it will be difficult to expand programs where needed, or identified, in the coming years, and it will be difficult to create a new Career Connected Learning (CCL) structure without an expansion of staffing, which will not be possible.

Please explain the CTE administrative structure at your LEA?

The administrative structure for CTE in the HCPSS at Central Office is as follows.

1. Department of Equity and Innovation
 - a. Director of Strategic Initiatives
 - i. Coordinator of Career and Technical Education

1. CTE Instructional Facilitator
2. CTE Resource Teacher
3. CTE Resource Teacher for Apprenticeship
4. CTE Resource Teacher for Apprenticeship
5. CTE Specialist for purchasing and budget related processes

NOTE: Within the HCPSS, the CTE Program as a whole falls under the Office of Strategic Initiatives, which is primarily focused on all things Blueprint, due to CTE's direct relationship and associated requirements with Blueprint.

In addition to the above there are administrative structures in place for all locations where CTE programming is offered:

- ARL Administrator for the CTE Center
- An identified Assistant Principal at each HS that supervises all CTE instructional staff within their buildings
- Each high school also has an identified Instructional Team Leader (ITL) that supports and provides guidance related to school-based initiatives, system initiatives, and CTE specific updates, processes and initiatives
- All CTE content areas have an identified Content POC for the purpose of providing updates, communication, creating collaboration opportunities, and designing and implementing professional learning in collaboration with the CTE Leadership Team Program staff

LEA Teachers

What are the requirements to be an instructor in this LEA?

The HCPSS follows all MSDE guidelines and requirements that are associated with hiring and ensuring highly qualified instructional staff are in place as much as possible. This primarily includes certificated / licensed CTE instructors, but as there has been a teacher shortage over the past several years there has been an increase with the need for conditional / provisional staff that are interested in working towards needed licensure / certification.

How are teachers recruited in this LEA?

Teachers are recruited through efforts of our Human Resources (HR) Department at local colleges and universities, through job fairs that occur throughout the year, and through consistent marketing efforts for position vacancies. In addition to the efforts of our HR Department, there are also efforts directly within schools from CTE Leadership and staff to promote and recruit individuals from other contents that are tenured and are looking for a change with content and instruction. CTE currently has the largest identified transfer rate, meaning teachers wanting to move to CTE from another content, within the HCPSS.

How are teachers retained in this LEA?

The primary means of retaining CTE teachers is by providing support through the Instructional Support Plan (described in greater detail with a response above), and helping every CTE instructor to identify and reach their goals while also allowing them to grow and advance to alternative positions where there is interest. Our instructor retention rate has

increased over the past several years where the majority of individuals leaving are as a result of retirement, and not being unhappy within their roles.

It should be noted however that due to budget issues and constraints there have been surpluses annually that have left many CTE instructors having to move schools from year to year, and that has not helped the positive and supportive environment that we have worked so hard to create.

What difficulties do you face with recruitment and retention?

Budget issues and constraints

A lack of local or regional colleges and/or institutions offering degrees or specified certifications for areas of instruction

Recent MSDE guidelines for individuals to become provisional CTE teachers

We have had many career changers express interest in becoming teachers, but when they find out the requirements, the number of credits that they must complete, and the timeframe in which they have to complete all requirements while also concurrently being a teacher, their interest quickly fades

The budget cycle of our district, being specifically related to local government, does not permit us to open our hiring processes until after many other districts. So, we annually lose many applicants to other districts due to their hiring processes opening earlier, annually, and our county budget cycle not permitting us to do the same.

How is teacher feedback/perspective incorporated into administrative decision-making?

Teacher input and feedback are incorporated in the scheduling process, but as the ultimate drivers of scheduling are dependent upon budget and staffing allocations, oftentimes the recommendations of CTE instructors, or the CTE program as a whole, are not possible. All school based scheduling processes and decisions are made by our Division of Schools, and specifically the administrators at schools, making it difficult for CTE input as a whole to be fully considered with the current budget, staffing and scheduling issues that exist.

Teacher input, guidance, and feedback are also incorporated into all curriculum revisions as it is our teachers that are leading revising curriculums where applicable.

Career Exploration

How is career coaching structured in your LEA? Is there a WBL Coordinator? How frequently does an LEA representative meet with an Apprenticeship Navigator?

Utilizing Blueprint passthrough funds, HCPSS and the Howard County Office of Workforce Development (OWD) have a joint staffing model that includes 13 HCPSS Career Readiness Advisors (CRA) and 12 Office of Workforce Development Career Coaches.

Under the leadership of the Coordinator of Postsecondary Access and the Resource Advisor for College and Career Readiness, HCPSS Career Readiness Advisors are certificated educators with extensive experience working with students implementing multiple efforts around comprehensive career counseling for students in grades 6-12. OWD Career Coaches have previous experience in youth and workforce development and gain the National Career Development Association (NCDA) Global Career Development Facilitator (GCDF) Certification and the School Career Development Advisor (SCDA) Certification.

The CRA team focuses on implementation of programming designed to ensure each student receives comprehensive career counseling (in collaboration with OWD) and graduates high school with a well-informed post high school plan (using the six year plan required by Blueprint as the foundation). The work of the HCPSS CRA team is anchored in the following initiatives:

- Middle School Naviance implementation
- Leadership and implementation of the interdisciplinary high school Careers Team
- Monthly Spotlight career cluster awareness initiatives at all middle and high schools
- Intentional focus engaging with students in danger of not, or not on track to, meet the CCR indicator by the end of 10th grade.

Many of these initiatives, including the Careers Team and Monthly Spotlight initiatives, are augmented by collaboration with the 12 Howard County Office of Workforce Development Career Coaches. In our split staffing model, the OWD career coaches serve as counterparts to the Career Readiness Advisors with intentional focus on:

- connecting students in grades 6-12 with the local business community.
- Post-secondary planning intervention for 11th and 12th graders
- School-based career exploration opportunities with local industry employers
- System-wide industry exploration fairs, job shadows, work experience opportunities (obtaining paid work, internships, apprenticeships etc and maintaining employment)
- Career readiness workshops and individual support (resume development, interview preparation, professional communication, transferable skill development, networking, etc).
- Career coaches also lead business outreach for each high school's business ecosystem and maintain a youth employment and opportunity board in addition to providing labor market information aligned with the Advanced CTE career clusters.

In addition, OWD career coaches work intentionally to support students who do not have a post high school-plan as well as provide support to high school students currently engaging in Apprenticeship opportunities. Leveraging a multi-tiered system of support model in tandem with this split staffing , career counseling services are able to be effectively deployed to ensure that all students receive comprehensive career counseling, and students who need more intentional support receive them where identified.

Our HCPSS AMP team works closely with the Maryland Department of Labor apprenticeship navigator to plan, build, and scale high quality opportunities for students. Together we coordinate site visits with prospective and current employers, design and refine programs, and recruit new business partners who are ready to sponsor apprentices. This partnership

helps us move quickly from interest to implementation while maintaining compliance and quality.

What our joint work typically includes

- Employer readiness reviews that cover job roles, supervision, and safety
- Site visits to confirm training environments and to align work processes with apprenticeship standards
- Mapping of on the job training tasks to related instruction with sponsors such as HCC and IEC
- Development or revision of standards, competencies, and wage progressions that meet state approval
- Support for sponsor registration, apprentice agreements, and required documentation
- Conversion of youth apprenticeship roles to fully registered positions when students and employers are ready
- Outreach to new sectors and employers, plus information sessions for families and students
- Guidance on available incentives and funding so employers can participate at scale

This coordinated approach strengthens employer partnerships, speeds up the launch of new occupations, and ensures that students receive high quality related instruction and on the job training that lead to credentials and employment.

HCPSS participates in the countywide apprenticeship leadership team known as HOCO WORKS. This coalition brings together Howard County Government, Howard Community College, the Maryland Department of Labor, local employers, the workforce board, and community partners to align goals, remove barriers, and grow high quality youth and registered apprenticeships.

What career exploration opportunities are available to students in your LEA?

Career exploration opportunities are available to students under the following initiatives lead by the Career Readiness Advisors:

Students in Grades 6-12 leverage Naviance as the CCR platform. Driven by the HCPSS CRA's in collaboration with school leadership and staff, Naviance is leveraged in several intentional ways. Specifically, it is embedded in core content classes, through the school counseling curriculum, and intentional use by Student Support and Engagement and Multilingual Learner teaching staff to connect students with career exploration opportunities aligned with their interests and strengths.

The Monthly Spotlight career cluster initiative at each high school highlights a specific career cluster for students. Guest speakers, career cafes, field trips, and connections with Howard Community College to explore potential degree pathways aligned with the selected cluster occur monthly. The Howard County Office of Workforce Development augments the CRA-driven monthly spotlight initiative with virtual reality activities (pending MSDE VPAT

exemption - an example of a AA Accessibility law barrier)) and cluster-aligned micro job fairs at middle and high schools when requested.

The Careers Team at each high school, led by the HCPSS CRA, organizes a series of career exploration events throughout the school year to align with school-community specific trends and interests. The OWD Career Coach is a member of the careers team and supports event implementation as needed.

Individual and small group career counseling with students completed by the HCPSS CRA and/or OWD Career Coach may lead to students being intentionally connected to OWD's Summer Youth Employment initiative.

How do students access their career coach(es)?

Career Counseling is anchored in the school counseling offices across HCPSS. OWD Career Coaches are in high schools 3-4 days per week. HCPSS Career Readiness Advisors are in their assigned middle and high school on a daily basis to meet with both staff and students.

How does/do the career coach(es) serve students in your LEA?

The HCPSS Office of Postsecondary Access has developed a multitiered system of support that guides the work of the HCPSS Career Readiness Advisors. Anchored in the work to leverage Naviance across grades 6-12, the Monthly Spotlight initiative, the multidisciplinary Careers Team at each high school, and support for students not meeting the CCR indicators, the supports to students take the following forms:

Tier 1: All Students receive Curriculum-embedded and school community initiatives focused on self-awareness, career awareness and exploration, and career readiness

Tier 2: Students in danger of and/or not meeting CCR indicators receive proactive career-connected interventions

Tier 3: Students without a well-developed post high-school plan receive intentional counseling from HCPSS staff and external partners (Howard Community College, OWD, etc) specifically focused on alignment with and placement into postsecondary opportunities

Opportunities to plug in OWD Career Coaches to Tier 1 and 2 supports are continuing to develop as we collaborate to elevate best practices and a sustainable model of service delivery in alignment with existing HCPSS priorities and Blueprint Requirements.

INFORMATION FOR VISITING SCHOOLS

Howard High School

School Leadership: Allen Cosentino

School Contact: 410-313-2867

School Website <https://hohs.hcpss.org/>

River Hill High School

School Leadership: John DiFato



School Contact: 410-313-7120
School Website <https://rhhs.hcpss.org/>

Applications and Research Laboratory

School Leadership: Mikaela Lidgard
School Contact: 410-313-6998
School Website <https://arl.hcpss.org/>

Overview of CTE School Administrators, Teachers, Career Counselors, Staff, etc.

CTE Lead, School Administrators & Staff

Howard High School

Allen Cosentino – Principal
Patrick Scible – CTE Administrator
Nils Schroder – CTE Instructional Team Leader

River Hill High School

John DiFato – Principal
Farah Jawhar – CTE Administrator
Teresa Waters – CTE Instructional Team Leader

ARL (Applications and Research Laboratory)

Mikaela Lidgard – ARL Administrator
Terry Walker – CTE Instructional Team Leader
Jeffrey Fisher – CTE Instructional Team Leader

Teachers and Faculty

Howard High School

Name	Subject	Years in Position	Classes
Jason Johnson	Computer Science	5+	Exploring Computer Science Honors Advanced Topics in Computer Science GT Computer Science Principles AP
Nicholas Zaron	Computer Science	10+	Programming Fundamentals GT Computer Science Principles AP Computer Science A AP Advanced Object Oriented Design GT
Amanda Orndorff	Teacher	10+	Teaching As a Profession GT (dual enroll.) Human Growth and Development GT (dual enroll.) Field Experience in Education
Jay Morraye	Project Lead the Way: Engineering	20+	Intro to Engineering Design GT Principles of Engineering GT Computer Integrated Manufacturing GT Engineering Design and Development GT
Col. Lee Mitchell	JROTC	<1	JROTC III JROTC IV
Shawn Boone	JROTC	<5	JROTC I JROTC II
Matt Hanson	Culinary Science	2	Food and Nutrition Technology Advanced Culinary Science
Michael Kaplan	Career Research and Development	2+	Career Research and Development I Career Research and Development II Site Based Work Experience

River Hill High School

Name	Subject	Years in Position	Classes
Teresa Waters	Accounting / Business Management / Marketing	20+	Principles of Business Management GT (dual enroll.) Principles of Accounting and Finance Honors Advanced Business Management Honors Principles of Marketing Honors
Katie Noecker	Teacher	15+	Teaching As a Profession GT (dual enroll.) Human Growth and Development GT (dual enroll.) Foundations of Curriculum and Instruction GT (dual enroll.) Field Experience in Education Sitebased Work Experience
Chad Boothe	Computer Programming	10+	Programming Fundamentals GT Computer Science A AP Advanced Object Oriented Design GT Advanced Topics in Computer Science GT
Tim Ryan	PLTW Engineering	20+	Intro to Engineering Design GT Principles of Engineering GT Computer Integrated Manufacturing GT Engineering Design and Development GT
John Moscato	PLTW Engineering / Computer Science	10+	Foundations of Technology Intro to Engineering Design GT Digital Electronics GT Computer Science Principles AP
Patricia Hummel	Career Research Development / Culinary Science	10+	Career Research and Development I Career Research and Development II Food and Nutrition Technology Culinary Science
Arthur Robinson	Computer Science	5+	Exploring Computer Science Honors Computer Science Principles AP

Applications and Research Lab

Name	Subject	Years in Position	Classes
Laura Hartman	Academy of Health Professions	10+	Foundations of Healthcare Honors Certified Clinical Medical Assistant Honors
Tina LeBaron	Animation and Interactive Media	20+	Animation and Interactive Media I Animation and Interactive Media II
Brian Taylor	Cybersecurity Networking	15+	Computer Networking GT I Computer Networking GT II
Daleth Sendin	PLTW Aerospace Engineering	15+	PLTW Aerospace Engineering GT I PLTW Aerospace Engineering GT II
Christy Smith	Health Professions	5+	Foundations of Healthcare Honors Certified Nursing Assistant /Patient Care Tech: Theory and Clinical Honors
Hina Naseem	Finance	10+	Academy of Finance GT I Academy of Finance GT II
Jerry Burns	Automotive Technology	15+	Automotive Technology I Automotive Technology II
Josh Davey	Construction	15+	Construction Technology I Construction Technology I
Terry Walker	Architectural Design	10+	Architectural Design Advanced Architectural Design

Career Counselors, Coaches, and Related Staff

LaRee Siddiqui Coordinator of Post Secondary Access (Dual Enrollment / Career Counseling)
Experience: 24 Years

Linsey Mayhew Senior Strategist, Youth Workforce Education Experience: 20 Years

Grace Dellinger Career Readiness Advisor Lead Experience: 17 Years

Matt Gittermann Career Readiness Advisor, MRHS Experience: 22 Years

Monica Stevens Career Readiness Advisor, HaHS Experience: 24 Years

Craig Alessio Career Readiness Advisor, LRHS Experience: 19 Years

Lindsay Beil Career Readiness Advisor, GHS Experience: 17 Years

Ellen Mauser Student Services ITL / School Counselor, CHS

Melody Green-Lewis School Counselor, HoHS

Erin Coleman School Counselor 1 / ARL

Sandra Diaz Career Coach, WLHS Experience: 8 Years

Cathy Rhine Career Coach, GHS Experience: 15 Years

Peninna Adantor Career Coach, HaHS Experience: 8 Years

CTE PROGRAMS AND ENROLLMENT AT VISITING SCHOOLS

Applications and Research Lab: 1476 Total Enrollment

CLUSTER	CTE PROGRAM	ENROLLMENT NUMBER	COMPLETION RATE	IRC ATTAINMENT RATE
Arts Media and Communications	Animation and Interactive Media	90	100%	83%
Arts Media and Communications	Graphic Design	48	100%	71%
Business Management and Finance	Academy of Finance	88	100%	n/a
Construction and Development	Architectural Design	47	100%	89%
Construction and Development	Construction	35	100%	3/13
Construction and Development	HVAC	30	100%	60%
Environment, Agriculture and Natural Resources	Agricultural Science	30	100%	n/a
Health and Biosciences	Biotechnology	132	100%	82%
Health and Biosciences	Health Professions	383	100%	76%
Information Technology	Cybersecurity Networking	181	100%	55%
Manufacturing, Engineering, and Technology Cluster	Project Lead the Way (PLTW) Aerospace Engineering	47	100%	96%
Manufacturing, Engineering, and Technology Cluster	Project Lead the Way (PLTW) Civil Engineering	42	100%	96%
Transportation Technologies	Automotive Technology	96	100%	91%

Howard High School: 1400 Total Enrollment

CLUSTER	CTE PROGRAM	ENROLLMENT NUMBER	COMPLETION RATE	IRC ATTAINMENT RATE
Business Management and Finance	Accounting	107	<5	n/a
Business Management and Finance	Business Management	110	<5	n/a
Business Management and Finance	Marketing	113	<5	n/a



Consumer Services, Hospitality and Tourism	Culinary Science	105	<5	0
Human Resource Services	JROTC Army	99	100%	n/a
Human Resource Services	Teacher Academy of MD	68	<5	100%
Information Technology	Computer Programming	48	55%	64%
Information Technology	Computer Science	28	60%	77%
Manufacturing, Engineering, and Technology Cluster	Project Lead the Way (PLTW) Engineering	93	70%	73%
Work Based Learning	Apprenticeship MD	8	100%	100%
Work Based Learning	Career Research and Development	33	13%	n/a

River Hill High School: 1337 Total Enrollment

CLUSTER	CTE PROGRAM	ENROLLMENT NUMBER	COMPLETION RATE	IRC ATTAINMENT RATE
Business Management and Finance	Accounting	72	<5	n/a
Business Management and Finance	Business Management	n/a		n/a
Business Management and Finance	Marketing	n/a		n/a
Consumer Services, Hospitality and Tourism	Culinary Science	27	<5	0
Human Resource Services	Teacher Academy of MD	16	<5	100%
Information Technology	Computer Programming	14	100%	74%
Information Technology	Computer Science	22	100%	80%
Manufacturing, Engineering, and Technology Cluster	Project Lead the Way (PLTW) Engineering	110	70%	96%
Work Based Learning	Apprenticeship MD	3	100%	100%
Work Based Learning	Career Research and Development	24	100%	n/a

Overview of CTE Programs (Sample Below)

Please provide a link to the CTE course of study/programs of study on your website:
Link: <https://www.hcpss.org/academics/career-technical-education/>

[HCPSS CTE Promotional Packets](#)

Student Apprenticeship [Guidebook](#)

Employer Apprenticeship [Guidebook](#)

Community Context

Nearby Universities & Community Colleges

Howard Community College
Lincoln College of Technology

Economic Profile ([Full Economic Profile](#))

Howard County is one of the nation's premier communities, centrally located between two of the largest metropolitan areas, Washington D.C. and Baltimore. With over 320,000 residents and one of the nation's most educated workforces, the county is nationally recognized as one of the best places to live, work, and raise a family. It is at the center of the growing cyber security industry due to proximity to Fort George Meade, U.S. Cyber Command and National Security Agency. The county is also home to major research institutions such as Johns Hopkins Applied Physics Lab and companies like W.R. Grace, Merkle, Tenable Network Security, Medstar, and Maxim Healthcare Services.

Howard County's strategic location, strong employment base, enviable quality of life, and superior suburban setting position it as an excellent place to live and do business. The county's private sector industries generate \$27.8 billion in economic output. Corporate citizens range from health care organizations and biotech companies to information technology, telecom, foreign-owned corporations, wholesale distributors, and additive manufacturers. Recent new and expanding businesses in the county include Cavalier Logistics, Amazon, FLIR, and KBR. Business parks are strategically located along the I-95 corridor and provide easy access to BWI Thurgood Marshall Airport, Port of Baltimore, Washington D.C. and Baltimore. Howard County is also home to the Maryland Innovation Center, one of the state's leading business incubators and innovation hubs.

[Educational Attainment](#)

Source: 2023 [United States Census](#)

Label: Age By Educational Attainment	Estimate Total	Estimate %
Population 18 to 24 years	26,785	(X)
Less than high school graduate	2,543	9.5%
High school graduate (includes equivalency)	8,556	31.9%
Some college or associate's degree	9,058	33.8%
Bachelor's degree or higher	6,628	24.7%
Population 25 years and over	230,165	(X)
Less than 9th grade	8,362	3.6%
9th to 12th grade, no diploma	3,784	1.6%
High school graduate (includes equivalency)	30,234	13.1%
Some college, no degree	28,079	12.2%
Associate's degree	15,843	6.9%
Bachelor's degree	70,662	30.7%
Graduate or professional degree	73,201	31.8%
High school graduate or higher	218,019	94.7%
Bachelor's degree or higher	143,863	62.5%

Population 25 to 34 years	38,890	(X)
High school graduate or higher	36,555	94.0%
Bachelor's degree or higher	23,242	59.8%
Population 35 to 44 years	49,322	(X)
High school graduate or higher	46,138	93.5%
Bachelor's degree or higher	32,619	66.1%
Population 45 to 64 years	88,692	(X)
High school graduate or higher	84,679	95.5%
Bachelor's degree or higher	59,458	67.0%
Population 65 years and over	53,261	(X)
High school graduate or higher	50,647	95.1%
Bachelor's degree or higher	28,544	53.6%

Leading Business Groups²⁷

Name	Industry	Size Category
ABF Freight System Inc	Transportation and Warehousing	100-249

²⁷ [data in his table](#) comes from the Maryland Department of Labor, Division of Workforce Development and Adult Learning, Office of Workforce Information and Performance

Acme Paper & Sup Co Inc	Retail Trade	100-249
Acme Paper & Supply Co Inc	Wholesale Trade	100-249
Acme Paper Co	Wholesale Trade	100-249
ADT Security Svc LLC	Administrative and Support and Waste Management and Remediation Services	100-249
Advarra	Professional, Scientific, and Technical Services	100-249
Airtron Mid-Atlantic	Construction	100-249
Ally Behavior Ctr	Health Care and Social Assistance	100-249
Alpha Products Inc	Wholesale Trade	100-249
American Contracting-Environ	Construction	100-249
American Furniture Rentals	Real Estate and Rental and Leasing	100-249

Analygence	Professional, Scientific, and Technical Services	100-249
Antenna Research Assoc Inc	Manufacturing	100-249
Antwerpen Nissan Clarksville	Retail Trade	100-249
Antwerpen Toyota	Retail Trade	100-249
Aramark Refreshment Svc	Retail Trade	100-249
Arbitron Inc	Professional, Scientific, and Technical Services	100-249

Appendix B | School Visit Agenda

LEA Visit Agenda

Howard County Public School System

Visit Date: 10/22/2025
 Time: 7am - 3:00pm

Location: HCPSS Central Office
 10910 Clarksville Pike
 Ellicott City, MD 21042

Time	Activity
7:00AM-7:30AM	Meet and Greet / Agenda Overview at Central Office
7:30AM	The ERT is split in two, load buses and is transported to two HS locations (Howard HS and River Hill HS)
7:45AM	Arrival at HS locations (Howard HS and River Hill HS)

ERT 1: Howard High School (HoHS)

Amy Rock, Dave Harper, Edrees Nawabi,
 Heather Carias, Karen King-Sheridan,

ERT 2: River Hill High School (RHHS)

Adam Parry, Christine Lynch, Eugene
 Chong Qui, Minah Woo, Pam Smith,

Time	Activity	Time	Activity
7:55AM-8:40AM (45)	Student Focus Group Location: Career Center	7:55AM-8:40AM (45)	Teacher Focus Group Location: Media Center
8:50AM-9:35AM (45)	Classroom Visits / Tour (4) (40 - 4x10 for 4 classrooms)	8:50AM-9:35AM (45)	Student Focus Group Location: Media Center
9:35AM-9:55AM (10)	Break	9:35AM-9:55AM (10)	Break
10:00AM-10:40AM (45) (4x10)	Teacher Focus Group Location: Career Center	10:00AM-10:40AM (40) (4x10)	Classroom Visits / Tour (4) (40 - 4x10 for 4 classrooms)
10:40AM-11:00AM (15 - Travel to ARL)	Travel to the ARL for Lunch and Afternoon Agenda	10:40AM-11:00AM (15 - Travel to ARL)	Travel to the ARL for Lunch and Afternoon Agenda

Katherine Swanson-Palmer, Kristi Zehner,
 Sheila Jackson

Shamara Bownes, Tracey Hicks

PM Session: Applications and Research Laboratory (ARL)

ERT 1:

Amy Rock, Dave Harper, Edrees Nawabi,
 Heather Carias, Karen King-Sheridan,

Katherine Swanson-Palmer, Kristi Zehner,
 Sheila Jackson

ERT 2:



Adam Parry, Christine Lynch, Eugene Chong Qui, Minah Woo, Pam Smith, Shamara Bownes, Tracey Hicks

Time	Activity	Time	Activity
11:00AM-11:45AM (45)	Lunch Location: Media Center	11:00AM-11:45AM (45)	Lunch Location: Media Center
11:45AM-12:30PM (45) (4x10min)	Classroom Visits (4) (ERT 1) (40 - 4x10 for 4 classrooms)	11:45AM-12:30PM (45)	CTE Student Focus Group (ERT 2) Location: B8
12:30PM-1:15PM (45)	CTE Student Focus Group (ERT 1) Location: B8	12:30PM-1:15PM (45)	Career Counseling Focus Group (ERT 2) (45) Location: B8
1:15PM-2:00PM (45)	Career Counseling Focus Group Location: B8	1:15PM-2:00PM (45) (4x10min)	Classroom Visits (4) (ERT 2) (40 - 4x10 for 4 classrooms)
2:00PM-2:45PM (45)	Teacher Focus Group (ERT 1) (45) Location: Media Center	2:00PM-2:45PM (45)	Teacher Focus Group (ERT 2) (45) Location: Media Center
2:45PM-3:15PM (30)	Debrief Location: Media Center	2:45PM-3:15PM (30)	Debrief Location: Media Center

Facilitator/Recorder	Katherine Swanson-Palmer	Facilitator/Recorder	Shamara Bownes
Notes/Time	Edrees Nawabi	Notes/Time	Christine Lynch

Appendix C | Focus Group Protocol and Interview Questions

Focus Group Best Practices

To be read by CTE ERT before focus group or during Orientation

- **Stay Focused.** Focus groups are conversations with a purpose; remind both the CTE ERT and focus group participants what our purpose is. The CTE ERT is not here to provide our perspective, any solutions, assessments, or inform the LEA. Our role here is to make observations and collect our observations into a report identifying the state of CTE in Maryland and common challenges we can provide Technical Assistance for.
- **Ask Questions and Be Curious.** Focus groups run best when the CTE ERT focuses on asking questions and actively listening. If you need to, ask participants to repeat themselves. Ask follow-up questions. Be curious.
- **Keep Track of Time.** Time flies by in the focus groups, so the facilitator needs to have a ten-minute warning so both the CTE ERT and the participants know time is starting to run out. If the facilitator hasn't yet, move to the "Important Questions" with at least ten minutes left.
- **Speak Up.** The CTE ERT records focus groups (except students), but the range on the recorder isn't great, so we need folks to speak up. If there are announcements or bells going over the intercom, pause because the recorder and our transcription service won't be able to differentiate.
- **Cut Any Cross-Talk.** The CTE ERT should not be having conversations with each other during the focus group. It's not only disrespectful to focus group participants, but it also disrupts our transcription services.
- **Create a Safer Space.** Brief introductions and some light humor at the beginning of the focus group can ease participants to provide more authentic and honest reflections.
- **Be Mindful of Non-Verbal Cues.** So much is said before speaking, so please be intentional with non-verbal cues that may distract participants or make participants uncomfortable.
- **Summarize and Validate Participants.** We are here to observe and listen, so remember to validate participants' perspective with an accurate summary of what a few participants say.
- **Convey Appreciation.** Focus group participants take time out of their busy day to provide their perspective. Don't forget to thank them for their participation and explain how it will help improve CTE across the State.

Focus Group Reminders

To be used by team facilitator for focus group participants before starting

- We're here on behalf of the CTE Committee, committed to improving CTE programs in line with Maryland's goals outlined in the Blueprint.
- Our team represents a variety of different perspectives. Our members here today are teachers, administrators, school leaders, researchers, employers, local workforce board members, and CTE Committee staff and board members.
- Our purpose in this visit is to try to understand what is in place now in your LEA, including plans for expanding or strengthening existing programs and current challenges. We also want to identify any strong practices in place that we might be able to highlight statewide. These visits will also inform the CTE Committee's development of the statewide CTE framework.
- We are not here to “assess” or grade CTE programming or CTE teachers in schools or LEAs. We are here to observe, not judge.
- After the visit, CTE Committee staff will draft a LEA report summarizing what we saw and heard, including our understanding of the LEA's CTE strategy, current strengths and challenges, and suggestions to help the LEA reach its goals.
- We look forward to hearing about your experiences and your thoughts on what's working and where we can support CTE here in your LEA.
- We would like to record this session (except student groups) to capture your thoughts accurately—does that work for you all? To be clear, this recording is only for note-taking purposes; we ensure confidentiality meaning no names will be cited in our reports.
- Your contributions today will help us improve CTE programs both here and statewide. Any questions before we start?

Questions for CTE Teachers

Instructions for focus group lead: Please start by asking everyone to introduce themselves with the first question. Since there are a lot of questions to get through, ask for a few people, not everyone, to answer each of the following questions, asking for different perspectives as needed. Be sure to save at least ten minutes to ask “Important Questions”.

Priority Questions:

1. What program do you teach in and how long have you been in your role? What is your background in this area?
2. For newer teachers, what was your recruitment like? What were important factors for your decision to work here?
3. For senior teachers, what factors influence your decision to stay here?
4. Do you have contact with employers in your industry? If so, what partnerships have been most beneficial for students?
5. Where do students from your program go after graduating (i.e., further training, work, college, etc.)?

6. What support do you and/or the school provide to help CTE students develop post-graduation plans? Are your students getting time with a Career Coach as part of that support?
7. How do you measure the effectiveness of your CTE program, and what data or feedback informs changes or improvements?
8. If you could redesign your subject's program of study, what would you change?
9. What professional learning opportunities are available for you?

Important Questions to Ask with At Least 5 Minutes Left:

1. From your perspective, what are the strengths of your school's CTE programs?
2. What do you need as a CTE teacher that you feel you may not be getting?
3. What do you see as the key CTE challenges facing your school now?

Additional Questions:

1. How do you collaborate with your colleagues (CTE and academic teachers)? How do you collaborate with other colleagues within this LEA?
2. Do any of your programs have school-based businesses that serve the school community and/or local clients?
3. Do you think the certification requirements for CTE teachers are well-aligned to what is needed to teach in the area you teach in?
4. What CTSOs (Career and Technical Student Organizations) do you all participate in? What clubs/programs/sports do you all participate in? Can you speak to those and how they help students?
5. What do you see as the biggest hurdles in expanding CTE at your school?

Questions for CTE Students

Instructions for focus group lead: Please start by asking everyone to introduce themselves with the first question. Since there are a lot of questions to get through, ask for a few people, not everyone, to answer each of the following questions, asking for different perspectives as needed. Be sure to save at least ten minutes to ask "Important Questions".

Priority Questions:

1. What year are you, what program are you enrolled in, and why did you choose the program you're in?
2. How did you learn about the program you are enrolled in now? What was the process of getting enrolled into the program?
3. How has your experience in the classroom been for your CTE classes? How is it different from your other classes?
4. Have you had any work experience as part of your program?
5. If you have a different home school, how do you get to your CTE program and / or to your job (if applicable)?
6. Will you graduate with any certifications/credentials or college credits?
7. What is your plan post-graduation, and how did you develop it? Did you work with a career coach or career counselor to help with this plan?

8. How much do you know about careers in your industry (salary, training paths)? How did you get this information?

Important Questions to Ask with At Least 5 Minutes Left:

1. What would you say is the best thing about your program? What are some of your CTE program's strengths?
2. If you could change anything in your program, what would it be? What challenges have you faced in your CTE program?
3. Looking back on when you first enrolled in your CTE program, what advice would you give to students who are currently considering CTE as an option?

Additional Questions:

1. Are there any CTE programs you think the school/LEA should offer that it does not now?
2. Have you participated in any competitions or extracurricular activities related to your CTE program? If so, what was your experience like?
3. How well do you feel your CTE program is preparing you for the workforce or further education in your chosen field?
4. How do your family and friends perceive your enrollment in a CTE program, and has their perception changed since you started?
5. How does your school promote CTE programs to students, and what improvements would you suggest to increase awareness and interest?

Questions for Career Counselors/Coaches

Instructions for focus group lead: Please start by asking everyone to introduce themselves with the first question. Since there are a lot of questions to get through, ask for a few people, not everyone, to answer each of the following questions, asking for different perspectives as needed. Be sure to save at least ten minutes to ask "Important Questions."

Priority Questions:

1. How long have you been in your role? What is your background in this role? What is your title? Career Coach? Career Counselor? Something else?
2. How is career counseling organized at your school, and in this district? How do professional school counselors and career coaches work together in your district?
3. Is there a work-based learning coordinator and if so what is their scope of work and how do they interact with career counselors/coaches?
4. How does the career counseling staff stay up-to-date with CTE programming and workforce trends in the LEA and the state?
5. How are students introduced to and informed of CTE programs? Who leads this introduction? How are parents informed about CTE offerings?
6. How are students who change their minds about a program/career path supported?
7. What opportunities are there for career exploration/education in middle school? In high school?
8. How are CTE students supported in planning for post-CCR pathways?
9. How are CTE students supported in making post-graduation plans?

Important Questions to Ask with At Least 5 Minutes Left:

1. What do you see as the strengths of career coaching/career counseling in this school/district? What is going well? What are you celebrating?
2. What do you see as the challenges of career coaching/career counseling in this school/district? What has been a challenge?

Additional Questions:

1. Do you track post-graduation outcomes, such as enrolling in further education /training or entering the workforce?
2. In what ways does the school involve parents and the community in the CTE program?
3. How do you think the CTE guidance could be improved? Is feedback on guidance and support collected from students?
4. Are there issues with students being able to access CTE programs? If so, what are the reasons and what are current strategies to address access issues from your perspective?
5. What do you see as the biggest hurdles in expanding CTE at this LEA?

Questions for School/LEA Leadership

Instructions for focus group lead: Focus groups with School/LEA Leadership are rare since we receive most of this information through the Brief and Orientation. Please start by asking everyone to introduce themselves with the first question. Since there are a lot of questions to get through, ask for a few people, not everyone, to answer each of the following questions, asking for different perspectives as needed. Be sure to save at least ten minutes to ask "Important Questions".

Priority Questions:

1. How long have you been in your role? What is your background in CTE?
2. From your perspective, what are the strengths of your LEA/school's CTE program, and what have you made the most progress on recently?
3. Can you give us an overview of the structure of CTE programs in your school / LEA? If not addressed, ask about: Dual enrollment, WBL, Range of programs, Application process, Transportation
4. Is there capacity for all interested students to participate in CTE programs? Are there any barriers to enrollment?
5. For those students who are not able to enroll and stay on a waitlist, what's the process for those students? What happens if they don't get off the waitlist?
6. How does the LEA/district update CTE programs? What are some current plans you have for adding new programs, expanding existing programs or eliminating current programs?
7. What are your district's strategies for increasing CTE enrollment and WBL opportunities, particularly apprenticeships?

Important Questions to Ask with At Least 5 Minutes Left:

1. From your perspective, what are the strengths of your LEA/school's CTE program, and what have you made the most progress on recently?
2. What do you see as the key challenges facing your LEA/school now in CTE?
3. Where would you like the LEA to be in five years in regards to CTE?

Additional Questions:

1. Are any CTE teachers earning National Board Certification? If so, have they been able to move into differentiated roles?
2. How do you collaborate with local business and industry and community colleges?
3. Do you have sufficient teachers for current programs? If not, what are the issues in recruiting them?
4. What measures are in place to assess the long-term impact of CTE programs on students' career trajectories and contributions to the local economy?
5. Do certain programs have higher completion rates than others?
6. Are there clear pathways from current CTE programs to community college certificate and degree programs?
7. What strategies are employed to raise awareness and improve perceptions of CTE programs among students, parents, and the broader community?
8. In your opinion, how well does the programming at your school align with key (high-growth, high-wage) industries in your community and statewide?

Appendix D | Glossary and Acronym Guide

Term	Acronym	Definition
Accountability and Implementation Board	AIB	An independent unit of Maryland State government created by the <i>Blueprint for Maryland's Future</i> law to ensure successful implementation of the <i>Blueprint</i> over the multi-year implementation period and achievement of the <i>Blueprint's</i> intended outcomes.
American Job Center	AJC	One-stop centers where job seekers and employers access coordinated workforce services (also sometimes called One-Stops). Every local workforce area has at least one.
Bachelor of Arts	BA	University degree that focuses on liberal arts, humanities, social sciences, languages and culture, and fine arts.
<i>Blueprint for Maryland's Future</i>	<i>Blueprint</i>	A set of policies and dedicated funding that is intended to transform Maryland's early childhood, elementary, and secondary education system to the levels of high-performing systems around the world. The <i>Blueprint</i> became law in 2021 with a 10-year plan to create a world-class public school system by transforming early childhood, K-12, and career readiness, focusing on five key pillars: expanding universal Pre-K; developing high-quality teachers; creating career pathways, including CTE; increasing resources for struggling schools/students; and strong governance/accountability for equity and excellence. The <i>Blueprint</i> aims to ensure every student, regardless of background, achieves college and career readiness through increased funding and systemic changes.

Term	Acronym	Definition
Blueprint's 45% Goal	45% Goal	The <i>Blueprint for Maryland's Future</i> set a goal that by the 2030-2031 School Year, 45% of high school graduates will have completed the high school level of a Registered Apprenticeship or another industry-recognized credential (Md. Ed. Code §21-204). The joint CTE Vision, approved in 2025, updated this goal to specify that the goal would be out of CCR graduating students. This metric is calculated by adding together the high school level of a Registered Apprenticeship completion and the IRC attainment rate, divided by the total number of graduating students who are CCR. The CTE Committee is charged with defining the terms that meet the <i>Blueprint's</i> 45% goal. For more information on these policies, visit https://www.gwdb.maryland.gov/policy/gwdb2024_blueprintgoalpolicyoverview.pdf
Career and Technical Education	CTE	Courses and learning opportunities in a range of vocations that provide students with the skills, knowledge, and competencies necessary to thrive in their careers.
Career and Technical Student Organization	CTSO	National organizations for middle and high school students in CTE programs that develop real-world activities, competitions, and service projects to prepare students for future careers and higher education.
Career Connected Learning	CCL	A continuum of learning experiences that includes career awareness, career exploration, career preparation, and/or career training through learning. These experiences are connected to learner interests and abilities and industry- or occupation-based needs and expectations.
Career Counseling/Coaching	-	A new initiative within the <i>Blueprint</i> wherein LWDBs, LEAs, and their local community college partner together to provide individualized career counseling to all middle and high school students. Many of the areas have distinguished their career counselors from school counselors by referring to them as career coaches, hence the terminology counseling/coaching is used interchangeably.

Term	Acronym	Definition
Career Ladder	-	A compensation structure enacted by the <i>Blueprint</i> that is developed by an LEA with the input of local school leaders, educators, and union representatives that provides teachers with opportunities to advance in their careers while remaining in the classroom and recognizes high quality school leaders. As teachers advance to higher tiers of the career ladder, educators will take on additional leadership responsibilities.
Carl D. Perkins Career and Technical Act	Perkins V	Federal legislation providing funding for CTE in the U.S., aiming to prepare students for high-skill, high-wage jobs by linking academics with technical skills through hands-on training and support for special populations, with the latest version being Perkins V (2018) that reauthorized funding and emphasized strong business-industry connections and equity.
Code of Federal Regulations	CFR	The official compilation of federal rules and regulations, including those governing WIOA programs.
Code of Maryland Regulations	COMAR	Official compilation of all administrative regulations issued by agencies of the state of Maryland.
College and Career Readiness	CCR	A student's readiness to succeed in entry-level courses at a postsecondary institution or a professional pathway upon graduation from high school. The State Board of Education defines the College and Career Readiness (CCR) standard, as required by the <i>Blueprint</i> . To view this policy, visit https://marylandpublicschools.org/stateboard/Documents/CCR-Standard-Policy-Adopted-03-2025-A.pdf
Comprehensive High Schools	-	Comprehensive high schools are traditional high schools with available CTE programs for students to enroll in.
Comprehensive Local Needs Assessment	CLNA	Local applicants of Perkins V must conduct a comprehensive local needs assessment at least every two years and include it in their local application to be eligible to receive financial assistance. The law requires eligible applicants to describe how their CTE programs are sufficient in size, scope, and quality to meet the needs of all students served by the eligible recipient; and

Term	Acronym	Definition
		aligned to State, regional, Tribal, or local in-demand industry sectors or occupations identified by the State workforce development board or local workforce development board, including career pathways, where appropriate; or are designed to meet local education or economic needs not identified by State boards or local workforce development boards.
CTE Completers	-	Students who meet all requirements in a state-approved CTE program of study.
CTE Concentrators	-	An individual who has earned at least two credits in a single state-approved CTE program of study.
CTE Framework	-	Under the <i>Blueprint</i> , the CTE Committee is charged with developing a statewide Framework for CTE that prepares students for employment in a diverse, modern economy. Maryland's CTE Framework lays out the State's vision and priorities for CTE and supports the goals of the <i>Blueprint</i> . To view the CTE Framework, visit https://www.gwdb.maryland.gov/pub/pdf/2025-marylandscteframework.pdf?v1
CTE Participants	-	An individual who earns not less than one credit in a state-approved CTE program of study.
CTE Program of Study	CTE POS	A structured, multi-year educational pathway connecting high school academics with real-world career skills, allowing students to explore various fields, earn industry certifications and college credits, and gain work-based experience (internships, apprenticeships etc.) for smoother transitions to careers or further education. These programs align academic and technical standards, preparing students for today's dynamic workforce through hands-on career connected learning and partnerships with businesses.
Department of Public Safety and Correctional Services	DPSCS	Maryland state agency that is responsible for overseeing correctional institutions, community supervision, and related public safety programs to protect the public and support rehabilitation.
Division of Rehabilitation Services	DORS	DORS is an agency of MSDE. DORS is composed of the public vocational rehabilitation (VR) employment services program and the Disability

Term	Acronym	Definition
		Determination Services.
Division of Workforce Development and Adult Learning	DWDAL	A division within the Maryland Department of Labor, overseeing Maryland’s apprenticeship programs, Maryland Workforce Exchange, correctional education, and other workforce development initiatives.
Dual Enrollment	DE	An opportunity where high school students take college courses for both high school and college credit, often with low or no tuition, though requirements and credit transfer vary by state and institution. Programs can be on-campus, online, or at high schools, sometimes leading to an associate degree alongside a diploma. For the <i>Blueprint</i> -specific policy on dual enrollment, visit www.marylandpublicschools.org/stateboard/Documents/2024/0430/Joint-Policy-Dual-Enrollment-April-2024-A.pdf
Eligible Training Provider List	ETPL	WIOA mandates that each state have an eligible training provider list (or system, as it is called in Maryland) so the consumer can research career and training options suitable to their interests. ETPL is continuously updated to provide accurate information on currently approved eligible programs of postsecondary providers.
Employment Advancement Right Now	EARN	A Maryland state-funded, competitive workforce development grant program that is industry-led, regional in focus, and a proven strategy for helping businesses cultivate the skilled workforce they need to compete. It is flexible and innovative, designed to ensure that Maryland employers have the talent they need to compete and grow in an ever-changing 21st century economy.
Expert Review Teams	ERT	Created under the <i>Blueprint</i> , these are teams of expert educators and industry leaders who visit schools on scheduled visits to observe, interview, and engage with school faculty, staff, students, and stakeholders. ERTs will review data, conduct a comprehensive school visit, and then identify opportunities for improvement, particularly for implementation related to the <i>Blueprint</i> .

Term	Acronym	Definition
Fiscal Year	FY	Covers a funding period that starts on July 1 and ends on June 30, i.e., fiscal year 2023 (FY23) begins July 1, 2022, and ends June 30, 2023.
Governor’s Workforce Development Board	GWDB	<p>The GWDB is Maryland’s state workforce development board. State workforce development boards vary in name and structures across the U.S., but they all share statutory responsibilities under the 2014 Workforce Innovation and Opportunity Act (WIOA), including serving as the Governor’s policy-making body for workforce development, oversight of the state’s public workforce development system, and development of the state’s workforce development plan. State workforce boards are appointed by the governor and led by private sector business representatives, who make up a majority of the board’s membership. Boards also include organized labor; leaders from state agencies responsible for post-secondary education, career and technical education, workforce development and economic development; and community organizations. Boards often represent the embodiment of public-private partnerships. Maryland’s GWDB serves as the Governor’s chief strategy and policy-making body for workforce development by engaging key business, labor, education, community, and State and local government leaders to collaborate and advise the Governor on business-led workforce approaches that advance Maryland’s economic competitiveness and build pathways to work, wages and wealth for all Marylanders. Governor Wes Moore’s 2023 executive order concerning the GWDB solidifies its leadership role in setting the statewide vision and strategy for workforce development, building partnerships to accelerate implementation of that strategy, and holding Maryland’s workforce development system accountable to delivering results.</p>

Term	Acronym	Definition
Graduation Rate	-	The four-year adjusted cohort graduation rate is the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class. For any given cohort, students who are entering grade 9 for the first time form a cohort that is subsequently “adjusted” by adding any students who transfer into the cohort later during the next three years and subtracting any students who transfer out, emigrate to another country, or die during that same period. This definition is defined in federal regulation 34 C.F.R. §200.19(b) (1) (a)-(iv).
High School Level of a Registered Apprenticeship	HSLRA	A Registered Apprenticeship (RA) program, approved by the Maryland Apprenticeship and Training Council (MATC), that begins while an apprentice is in high school, and requires that students complete 144 hours of related instruction (RI) and at least 250 hours of paid on-the-job training (OJT) before their high school graduation. Further RA requirements continue post-graduation, in accordance with total program standards approved by MATC. For more information on this policy, please visit www.gwdb.maryland.gov/policy/gwdbcte2024commapprenticeshippolicy.pdf
Industry-Recognized Credential	IRC	A formal validation of an individual’s skills and/or competencies that align with state or regional in-demand occupations and are recognized by industry and employers. It may be a certification, license, or credential obtained through an assessment process, and is portable and may be stackable. The IRC leads to documented positive employment outcomes, ensures relevance in the labor market, and supports career advancement and economic development for credential holders. An IRC must be approved by the CTE Committee’s criteria to meet the definition of counting in the <i>Blueprint’s</i> 45% goal. For more information on this policy and which IRCs are currently approved, visit: marylandpublicschools.org/about/Pages/DCCR/industry-credentials.aspx

Term	Acronym	Definition
Labor Market Information	LMI	Data about jobs, wages, hiring trends, and economic conditions used to guide workforce planning and career decisions.
Local Education Agency	LEA	A local school system or school district. Maryland has 24 local education agencies, one for each of the counties and Baltimore City.
Local Workforce Development Board	LWDB	There are 13 local workforce areas in Maryland, each supported by a Local Workforce Development Board. The areas are guided and led by the private industry in the area to meet the current and future hiring needs of their employer community. The local workforce areas build connections between workforce development and economic development by serving as a vehicle for identifying needs and developing and ensuring implementation of an effective workforce strategy. Local workforce areas develop and oversee locally delivered workforce services as well as leverage community resources through their American Job Centers.
Maryland Apprenticeship and Training Council	MATC	An appointed Council that reviews all Registered Apprenticeship sponsor applications and decides if the program meets all the apprenticeship requirements.
Maryland Apprenticeship and Training Program	MATP	A unit within MD Labor’s DWDAL that oversees apprenticeship.
Maryland Department of Labor	MD Labor	Maryland state agency that provides job development and employment training to help citizens get the skills and expertise they need to move with the economy into Maryland's future.
Maryland Department of Legislative Services	DLS	Maryland state agency that operates under the policies and directives of the President of the Senate, the Speaker of the House of Delegates, the Legislative Policy Committee, and the Joint Audit Committee. DLS conducts research and drafts legislation for members of the Maryland General Assembly.
Maryland General Assembly	MGA	The legislative body of the state of Maryland, including the House of Delegates and State Senate.

Term	Acronym	Definition
Maryland Higher Education Commission	MHEC	State of Maryland's higher education coordinating board responsible for establishing statewide policies for Maryland public and private colleges and universities and for-profit career schools. MHEC also administers state financial aid programs that affect students on a statewide basis.
Maryland Longitudinal Data System Center	MLDSC	State agency created for the purpose of generating timely and accurate information about student performance that can be used to improve the State's education system and guide decision makers at all levels. To accomplish this task, the MLDS collects and organizes individual-level student and workforce data from all levels of education and the State's workforce.
Maryland State Department of Education	MSDE	State agency overseeing education throughout Maryland.
Maryland Workforce Association	MWA	Association of the 13 Local Workforce Development Board directors that collaborates with the Maryland Department of Labor, GWDB, and other state workforce partners to foster regional and statewide collaboration and sharing of best practices.
Maryland Workforce Exchange	MWE	Online job seeker/workforce services system. It was specifically designed for job seekers, students, case managers, employers, training providers, workforce professionals, and others seeking benefits and services.
Memorandum of Understanding	MOU	A legal document describing the broad outlines of an agreement that two or more parties have reached.
National Board Certification	NBC	Professional certification available in pre-K-12 education that certifies a teacher's demonstrated ability to positively impact student learning. NBC is administered by the National Board of Professional Teaching Standards (NBPTS).
On-the-Job Training	OJT	Hands-on training from an experienced mentor at the job site, focusing on skill and knowledge necessary for occupational proficiency. OJT is a requirement of the Registered Apprenticeship system.
Personally Identifiable	PII	

Term	Acronym	Definition
Information		
Reemployment Services and Eligibility Assessment	RESEA	Federally funded program that helps unemployed individuals return to work more quickly by combining eligibility reviews for unemployment insurance with personalized career guidance, job search assistance, and referrals to training and support services.
Registered Apprenticeship	RA	An industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, receive progressive wage increases, classroom instruction, and a portable, nationally-recognized credential. Registered Apprenticeships are industry-vetted and approved and validated by the U.S. Department of Labor or a State Apprenticeship Agency. In Maryland, Registered Apprenticeships are approved by the Maryland Department of Labor’s DWDAL in consultation with MATC.
Registered Apprenticeship Programs	RAP	Training programs that combine paid on-the-job training with related classroom instruction. RAPs provide workers with skills and industry-recognized credentials, ensuring quality through registration with USDOL or State Apprenticeship Agencies.
Related Instruction	RI	A systematic form of instruction that teaches technical and academic competencies that apply to the occupation, often in a classroom setting or online, for Registered Apprenticeships.
Request for Proposal	RFP	A document issued by an organization to solicit bids from vendors for a project or service. It outlines the project's requirements and evaluation criteria. Vendors submit proposals detailing how they will meet the requirements, including costs and timelines. The RFP process ensures competitive and transparent vendor selection.
School Year	SY	The months of the year during which school is open and attendance at school is required.
Social Security Number	SSN	

Term	Acronym	Definition
Special Populations	-	In Perkins V, special populations demographic groups include the following: (A) individuals with disabilities; (B) individuals from economically disadvantaged families, including low-income youth and adults; (C) individuals preparing for non-traditional fields; (D) single parents, including single pregnant women; (E) out-of-workforce individuals; (F) English learners; (G) homeless individuals described in section 725 of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11434a); (H) youth who are in, or have aged out of, the foster care system; (I) youth with a parent who - (i) is a member of the armed forces (as such term is defined in section 101 (a)(4) of title 10, United States Code); and (ii) is on active duty (as such term is defined in section 101(d)(1) of such title; and (J) migrant students (secondary only).
State Apprenticeship Agency	SAA	State-level entities that oversee and manage apprenticeship programs. They ensure programs meet federal and state standards, provide technical assistance, and promote apprenticeship opportunities to employers and job seekers.
State Determined Performance Level	SDPL	Targets set by states under Perkins V to measure the effectiveness of CTE programs. These performance levels assess how well CTE programs prepare students for postsecondary education and the workforce.
Supplemental Nutrition Assistance Program Employment & Training	SNAP E&T	Federal program run by states that helps people receiving food assistance (Supplemental Nutrition Assistance Program [SNAP]) get job skills, training, and work experience to find employment.
Technical Assistance	TA	The process of providing targeted support, such as training or resource sharing, to a specified body.
Temporary Assistance for Needy Families	TANF	Federally funded, state-administered program providing temporary cash assistance, job training, and support services (like childcare) to low-income families with children to promote self-sufficiency and economic stability, operating through block grants with flexible state-run programs.
United States Department of Education	USDOE	Federal agency that sets education policy and administers federal funding, working to serve America's students and support state/local

Term	Acronym	Definition
		systems.
United States Department of Labor	USDOL	Federal agency overseeing labor in the U.S.
Work-Based Learning	WBL	A continuum of activities that occur in part or in whole in the workplace, providing the learner with hands-on, real-world experience. It combines skill development with training opportunities and is a key strategy for developing talent and preparing students for the workforce and evolving labor market.
Workforce Innovation and Opportunity Act	WIOA	A federal law that aims to strengthen and improve the U.S. workforce system. WIOA provides funding for job training and education programs, promotes workforce development, and ensures that job seekers acquire skills necessary for employment. WIOA also supports employers in finding skilled workers and aligns workforce programs with economic development.
Youth Apprenticeship	YA	An apprentice with a valid Apprenticeship Maryland Program (AMP) agreement submitted by an LEA and their approved employer. AMP Youth Apprentices are not formally Registered Apprenticeships in Maryland. Participants are required to complete at least 450 hours of OJT and 1 credit of approved RI.



Maryland

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