

**Competitive Grant Proposal (CGP) for Demonstration  
Projects in**

**Accelerating Cyber Careers**



**Maryland Department of Labor**

**Issue Date: August 27, 2024**

**Proposal Due Date: October 4, 2024**

**KEY INFORMATION SUMMARY SHEET**  
**STATE OF MARYLAND**  
**Competitive Grant Proposal**  
**Demonstration Project: Accelerating Cyber Careers**

---

|                                |   |
|--------------------------------|---|
| <b>Purpose:</b>                | To support organizations in providing high-quality, in-demand cybersecurity training that incorporates the utilization of cyber ranges  |
| <b>Issue Date:</b>             | August 27, 2024   |
| <b>CGP Issuing Office:</b>     | Maryland Department of Labor<br>Division of Workforce Development and Adult Learning  |
| <b>Submission To:</b>          | Mary Keller at <a href="mailto:mary.keller@maryland.gov">mary.keller@maryland.gov</a>   |
| <b>Webinar Dates:</b>          | September 4, 2024, 1:00 PM  |
| <b>Proposals Due:</b>          | October 4, 2024   |
| <b>Application Size</b>        | Application Proposal Narratives are limited to 20 double-spaced pages. If an application is sent by email, then the applicant should be aware the submission inbox has a 20 megabyte limit. |
| <b>Selection Announcement:</b> | <b>Wednesday, October 30, 2024</b>  |
| <b>Funding Available:</b>      | \$1,800,000   |
| <b>Period of Performance:</b>  | Start date of <b>November 1, 2024</b> . 3-year project, with an option for 12 months of planning and 24 months of performance   |
| <b>Eligible Applicants:</b>    | Employers, Institutions of Higher Education, Tax-Exempt Organizations, Public Agencies, Local Workforce Development Boards, Registered Apprenticeship Sponsors, Maryland Residents          |
| <b>Labor Contact:</b>          | Mary Keller<br>Director, Office of Strategic Initiatives<br><a href="mailto:mary.keller@maryland.gov">mary.keller@maryland.gov</a>  |

---

## **Section 1 – Goals of the Project**

The goal of this project is to bolster the talent pipeline of highly-skilled cybersecurity professionals in Maryland by providing in-demand, hands-on training that incorporates the use of a cyber range. According to CyberSeek, there were more than 30,000 cybersecurity job openings in Maryland in 2023.<sup>1</sup> CyberSeek estimates that there are enough workers to fill 76 percent of those openings, meaning as many as 7,400 positions went unfilled last year. Furthermore, the Maryland Department of Labor tracks data for nine occupations categorized as key or core cybersecurity occupations.<sup>2</sup> Through 2032, these nine occupations alone are projected to have 7,675 new openings each year due to growth in the industry and labor market churn.<sup>3</sup> In other words, there are not enough workers in Maryland to meet the current needs of employers and employer needs are only projected to increase in the coming years.

## **Section 2 – General Information**

### **I. Summary Statement**

The Maryland Department of Labor (MD Labor), in partnership with the Governor’s Workforce Development Board (GWDB), is releasing this *Accelerating Cyber Careers* Competitive Grant Proposal (CGP) which aims to ensure cybersecurity employers have the highly-skilled workforce they need by offering hands-on training opportunities to current and prospective cybersecurity professionals. MD Labor’s Division of Workforce Development and Adult Learning (DWDAL) and GWDB will jointly administer this grant on behalf of the State of Maryland.

Successful applicants will demonstrate the ability to incorporate the use of cyber ranges into training programs meant to prepare current and prospective cybersecurity professionals for in-demand roles. In addition, applicants will be responsible for recruitment, screening, case management, wrap-around services, career coaching, job placement, and advancement strategies. Applicants must engage additional stakeholders, including employer and industry partners, to ensure programming is industry-led and that student experience on the cyber range provides hyper-realistic, cutting-edge scenarios. A successful proposal will demonstrate ability to have training lead directly to employment, credential attainment, and/or advancement within the cybersecurity industry.

---

<sup>1</sup> <https://www.cyberseek.org/heatmap.html>

<sup>2</sup> SOC Codes for these occupations are 15-1212, 11-3021, 15-1211, 15-1231, 15-1241, 15-1242, 15-1243, 15-1244, and 15-1299 as defined in this report from the Cybersecurity Workforce Data Initiative: <https://nces.gov/859/assets/0/files/nces-cwdi-supply-demand-report.pdf>

<sup>3</sup> <https://www.labor.maryland.gov/lmi/iandoproj/maryland.shtml>

## **II. Eligible Entities**

Organizations that are eligible to apply for and *Accelerating Cyber Careers* grant are:

1. Employers;
2. Institutions of Higher Education;
3. Tax Exempt Organizations (non-profit organizations);
4. Public Agencies (units of state, local, and/or municipal government);
5. Local Workforce Development Boards;
6. Registered Apprenticeship Sponsors; and,
7. Residents of the State of Maryland.

To ensure training participants receive relevant and in-demand training that provides adequate preparation for roles in cybersecurity, MD Labor *requires* applicants to establish partnerships with employer and industry partners. Proposals must include at least five employer partner letters of commitment. In addition, recognizing the holistic needs of jobseekers, applicants are strongly encouraged to partner with organizations who are able to help with vital components of programming such as recruitment, screening, assessment, barrier removal, and supportive services. Partnerships help to create and implement strategic plans that work to the strengths of each specific organization to better serve program participants.

## **III. Funding**

This grant is based on reimbursable funding. Funds are reimbursed after the Grantee provides a fiscal invoice for completed work. Funding for these projects will be available for three years beginning on **November 1, 2024**. A no-cost extension beyond this initial funding period may be granted if additional time to reach project goals is needed, significant progress towards goals has been made, and if justification is acceptable and reasonable. MD Labor and GWDB will consider applications that are geographically diverse across the State of Maryland and that develop regional consortiums.

## **IV. Office of Strategic Initiatives**

Prior to the award of a grant, all questions, correspondences, etc. of this CGP are to be sent to [mary.keller@maryland.gov](mailto:mary.keller@maryland.gov).

MD Labor may change the Program Manager at any time by written notice to prospective Applicants.

## **V. Revisions to the CGP**

If it becomes necessary to revise this CGP before the due date for proposals, amendments will be provided to all prospective Applicants who were sent this CGP or otherwise are known by the Program Manager to have obtained this CGP. Amendments made after the due date for proposals will be sent only to those Applicants who submitted a timely proposal and remain under consideration for award as of the issue date of the amendment.

If the applicant receives notice of an amendment to the CGP before the applicant submits their completed proposal, then that applicant shall also include as part of their application a formal acknowledgment of receipt for said amendment. Acknowledgement of the receipt of amendments to the CGP issued after the proposal due date shall be in the manner specified in the amendment notice. Failure to acknowledge receipt of amendments does not relieve the Applicant from complying with all terms of any such amendment

#### **VI. Proposal Webinar Dates**

MD Labor will offer a webinar in preparation for application to this CGP opportunity to review the application process, answer applicants' questions, and provide general technical assistance. This webinar will take place on **September 4, 2024 at 1:00 PM (Eastern Time)**.

#### **VII. Proposals Due Date**

An electronic copy of the proposal must be sent to Mary Keller ([mary.keller@maryland.gov](mailto:mary.keller@maryland.gov)). Proposals must be submitted no later than **11:59 PM (Eastern Time) on October 4, 2024** in order to be considered.

Requests for extension of the closing date or time shall not be granted. Proposals received by the Program Manager after the due date, **11:59 PM (Eastern Time) on October 4, 2024**, shall not be considered.

#### **VIII. Amendments, Cancellations, and Discussions**

The State reserves the right to amend or cancel this CGP at any time; accept or reject any and all proposals, in whole or in part, received in response to this CGP; to waive or permit cure of minor irregularities; and to conduct discussions with all qualified or potentially qualified Applicants in any manner necessary to serve the best interests of the State of Maryland. The State also reserves the right, in its sole discretion, to award a grant based upon the written proposals received without prior discussions or negotiations.

#### **IX. Oral Presentation**

Applicants may be required to make oral presentations to MD Labor and/or GWDB representatives in an effort to clarify information contained in their proposals. Significant representations made by an Applicant during the oral presentation must be put into writing at the time of the presentation. All such written representations will become part of the Applicant's proposal and are binding if the Grant is awarded. The Program Manager shall notify Applicants of the time and place of oral presentations.

#### **X. Applicant Responsibilities**

The selected Applicant shall be responsible for rendering services as required by this CGP. Subcontractors or sub-grantees shall be identified and a complete description of their role

relative to the proposal shall be included in the Applicant's proposal. The Applicant is responsible for ensuring that the subcontractor or sub-grantee is aware of the terms and conditions of the grant and has fully agreed to comply with the terms and conditions. The Applicant will be responsible to the Grantee for any breaches of the terms and conditions by its subcontractors or sub-grantees.

#### **XI. Grant**

By submitting an offer in response to this CGP, an Applicant, if selected for award, shall be deemed to have accepted the terms of the CGP and of the grant.

#### **XII. Compliance with Laws / Arrearages**

By submitting a proposal in response to this CGP, the Applicant, if selected for award, agrees that it will comply with all Federal, State and local laws applicable to its activities and obligations under the grant.

By submitting a response to this CGP, each Applicant represents that it is not in arrears in the payment of any obligations due and owing the State of Maryland, including the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of the grant if selected for grant award.

#### **XIII. Drug and Alcohol Free Workplace**

The Awardee warrants that they will comply with COMAR 21.11.08 Drug and Alcohol Free Workplace, and that they shall remain in compliance through the term of this Agreement.

#### **XIV. Fair Practices Certification**

The Awardee must certify that they prohibit, and covenant that they will continue to prohibit, discrimination on the basis of race, religion, color, sex (including pregnancy, childbirth and related medical conditions, transgender status, gender identity), marital status, genetic information, age, national origin or ancestry (including Limited English Proficiency), disability, veteran status or political affiliation or belief.

## **Section 2 – Scope of Work**

### **I. Introduction**

MD Labor's DWDAL is seeking applications to develop demonstration projects that will provide relevant, in-demand cybersecurity training that integrates hands-on experience on a cyber range.

Cyber ranges are interactive, simulated platforms and representations of networks, systems, tools, and applications.<sup>4</sup>

The aim of this CGP is aligned with Governor Moore's strategic vision for Maryland, as outlined in the Moore-Miller Administration 2024 State Plan:

- *Creating an Equitable, Robust, and Competitive Economy* by developing key sectors including IT/cyber security; and
- *Connecting Marylanders to Jobs* by helping workers move to in-demand occupations and supporting Marylanders in connecting to quality jobs.

The *Accelerating Cyber Careers* CGP will award funding to applicants who demonstrate the ability to provide in-demand, relevant training that infuses hands-on experience on a cyber range and leads to employment in cybersecurity roles. Preference will be given to applicants who:

- Devise creative strategies to serve populations traditionally underrepresented in the cybersecurity industry including women, individuals of color, and people with differing abilities;
- Develop partnerships to ensure individuals with knowledge in key cybersecurity areas that may require hands-on experience such as that provided by a cyber range benefit, including graduates of two and four year institutions of higher education, military members stationed in Maryland actively transitioning out of active duty, and members of the Maryland national guard units;
- Describe clear strategies for engaging employers on identifying skills gaps, curriculum development, training, and job placement;
- Provide participants with a clear path to unsubsidized employment that offers family-sustaining wages;
- Include career advancement strategies for cybersecurity professionals, including consideration of Registered Apprenticeship career pathways;
- Include braiding or leveraging of other public, private, and/or philanthropic funding streams, and/or in-kind support; and
- Demonstrate a willingness to offer use of the cyber range for purposes other than occupational training for immediately-hired employees, including capture the flag events, immersion activities, and industry-recognized credential- and Registered Apprenticeship-aligned training for high school students or other unique populations.

## **II. General Provisions and Other Requirements**

A. In the application, all applicants must:

1. Identify the target region and geographic scope for the project. Labor Market Information should be included to support the selection of the

---

<sup>4</sup>[https://www.nist.gov/system/files/documents/2023/09/29/The%20Cyber%20Range\\_A%20Guide.pdf#:~:text=Cyber%20ranges%20are%20interactive%20and,development%20and%20security%20posture%20testing](https://www.nist.gov/system/files/documents/2023/09/29/The%20Cyber%20Range_A%20Guide.pdf#:~:text=Cyber%20ranges%20are%20interactive%20and,development%20and%20security%20posture%20testing).

*Demonstration Project: Accelerating Cyber Careers*

region and geographic scope. The Maryland Department of Labor makes labor market information freely available on its website, including:

- a. Projections data by industry and occupation for Maryland and each LWDA at <https://www.labor.maryland.gov/lmi/iandoproj/>,
  - b. Data on employment and wages by job title for Maryland and each LWDA at <https://www.labor.maryland.gov/lmi/wages/>, and
  - c. Data on growth occupations for Maryland and each LWDA at <https://www.labor.maryland.gov/lmi/wiagrowthind/got.shtm>.
2. Identify the target population for training.
  3. Describe how the project will engage employer and industry partners on the skills gap identification, curriculum development, key uses of a cyber range, and any vital knowledge, skills, and abilities gained from use of a cyber range in training. Applicants must demonstrate the ability to assist employers in identifying real-world cyber skillsets, assist employers in helping them to more clearly define cyber role requirements, and thoroughly discuss how the identified range scenarios meet these identified needs.
  4. Demonstrate a clear plan for the development of training curricula that incorporates hands-on experience on a cyber range. Plans should be as detailed as possible and should include (as applicable) program length, any industry-recognized credentials earned, amount of time spent on a cyber range, and knowledge, skills, and abilities expected to be gained through use of a cyber range. Focus should be placed on development of hands-on skills that directly correlate to on-the-job requirements that can be immediately implemented by a candidate in a real world work environment.
  5. Describe how the project will engage employer and industry partners to ensure participants are connected with employment in a meaningful way. This may include employers' willingness to participate in job fairs, offering working interviews, providing mentorship opportunities, Registered Apprenticeship career pathways, and/or other forms of on the job training.
  6. Describe the capabilities of the cyber range, the estimated shelf life, physical location, remote access capabilities, and the number of concurrent cyber range environments and users. The applicant should describe how the cyber range will be maintained, by whom, and the frequency of updates and enhancements, patches, and architecture changes. Describe the types of key user scenarios that will be supported



*Demonstration Project: Accelerating Cyber Careers*

by the cyber range. Applicants should also describe how operational technology security is incorporated into the cyber range experience.

7. Describe the technical specifications of the range, including the network device types (firewall, router, IDS/IPS), Operating System types (Windows, Linux, Android, IOS), and device types (mobile phone/tablet, servers, workstations, peripheral devices such as printers/copiers, etc.).
8. Describe the security posture of the user cyber range environment. This should include the intentional testable security controls, vulnerabilities, misconfigurations, and other intentional weaknesses to be discovered by the cyber range users.
9. Provide a detailed description of how participants will be recruited and selected for training.
10. Describe the supportive services that will be offered, including identification of the organization that will provide supportive services.
11. Detail past performance on a project of similar scope (if applicable).
12. Provide expected outcomes over a 36-month period of performance. At a minimum, outcomes must include the number to enroll in training, the number to complete, the number to obtain employment, and the number to earn an industry-recognized credential (if applicable), and the average starting wage.
13. Include a detailed timeline for planning and implementation over a 36-month period of performance.
14. Describe how the project will infuse and advance equity, including strategies to serve individuals traditionally underrepresented in cybersecurity including women, individuals of color, and persons with differing abilities.
15. Provide a plan for how the training and cyber range will be sustained in the absence of state funds.
16. Detail any leveraged resources that will be used to support the project.

B. Applicants must include relevant letters of commitment, including five letters of commitment from employer partners. (Letters of commitment do not count against the 20 page proposal limit).

C. Applicants are strongly encouraged to work in collaboration with, and provide letters of commitment from, the following types of organizations:

1. Local Workforce Development Areas (Local Areas);
2. Non-Profit Organizations;
3. For-profit, private sector businesses;
4. Industry associations;

5. Local and regional economic development entities; and
6. Registered Apprenticeship Sponsors.

D. Applicants are strongly encouraged to build in the appropriate supports to maximize the likelihood of completion of training and retention in the workforce. Applicants are encouraged to include funding in their proposed budget to offer supportive services to eligible participants. Eligible supportive services are as follows:

1. **Assistance Obtaining a Driver's License:** Awardees may provide participants assistance with obtaining a driver's license, except for paying legal fees and/or fines. Examples of assistance may include payment for driver's education<sup>5</sup> or the cost of getting the driver's license card.
2. **Transportation Assistance:** Transportation allowances are available to participants. The transportation allowance must be related to program participation and can cover the cost of traveling to and from training, job interviews, and job fairs, or, as support during the first two weeks of starting a new job. Transportation allowances require:
  1. Documentation to verify the actual distance traveled and/or a receipt for the cost of the transportation service (e.g. public transit); and,
  2. Confirmation of the participant's attendance for the program(s) that required travel.

*Payment Guidelines:* Transportation allowances can be used for public transit users, drivers, and/or rideshare such as Uber, Lyft, or Zipcar.<sup>6</sup> Awardees must collect and maintain appropriate documentation to verify the participant's covered transportation allowance. For public transit users, Awardees may cover the expenses for bus, light rail, metro subway, MARC train, Washington Transit, or Commuter Choice Maryland. For drivers, Local Areas may approve a travel allowance at a rate not higher than the official Internal Revenue Service (IRS) mileage rate. The maximum allowable payment is \$50 per day, with a maximum cap of \$250 per week. Google Maps or MapQuest must be used to determine daily mileage. Mileage is calculated from the participant's home address to the training, interview, job fair, or job site.

---

<sup>5</sup> "Behind-the-Wheel" hours are eligible as long as they are included as part of the driver's education course.

<sup>6</sup> Other forms of transportation assistance may be funded with MD Labor prior approval.

3. **Uniforms, Tools and Related Equipment:** Awardees may assist eligible participants with the costs of uniforms, tools, and/or equipment required for participation in approved training programs or new jobs. Examples of covered items include but are not limited to: access to the necessary technology to participate in training or access to the internet.

*Payment Guidelines:* Awardees must base payments on the curriculum requirements of the training program or on the requirements of the participant's new, full-time job. Payments must be made based on the market value for uniforms, tools, and/or related equipment. Awardees must collect and maintain appropriate documentation to verify the participant's covered allowance.

4. **Child or Dependent Care:** Grantees may assist participants with child and dependent care expenses if the individual in care is:
1. Under the age of 13;
  2. Under the age of 18 and physically or mentally incapable of self-care;
  3. A spouse who is physically or mentally incapable of self-care and has the same principal address of the program participant; or,
  4. A parent who is physically or mentally incapable of self-care.

**5. Application Fees:** Awardees may assist participants with application fees for participation in MD Labor approved Registered Apprenticeship programs. Any application fees reimbursed must occur only after the participant is successfully registered as a Registered Apprentice.

**6. Clothing for Interviews and Job Fairs:** Awardees may assist participants with the costs associated with clothing for job interviews and/or job fairs. Examples of items that this supportive service covers include: dress shirts, ties, business suits or suit coats, dresses, khaki pants, or dress shoes. Grantees must collect and maintain appropriate documentation (receipts or invoices) to verify the participant's covered clothing allowance.

*Payment Guidelines:* Awardees should base the supportive service payment on documentation of an upcoming interview or job fair. The payment must be made on the market value of the item. The maximum allowable payment is \$100 per participant.

**7. Stipends:** Stipends, which offer program participants a fixed cash payment, are an allowable supportive service when the awardee has a substantiated reason to believe that the payment is necessary to the program participant's successful completion. Applicants must specifically note in their proposal if they intend to utilize stipends in their projects.

**8. Other Supportive Services:** Other supportive services may be funded with MD Labor approval. If an awardee has a substantiated reason to believe that a supportive service payment, outside of what has already been identified in this policy issuance, would be appropriate and necessary to a program participant's successful completion, then the Awardee has the option to notify MD Labor and provide a written proposal to justify the prospective supportive service. MD Labor staff will review the proposal and determine whether the cost is appropriate for inclusion as a supportive service.

#### E. Allowable Use of Funds

1. Allowable use of funds include supportive services as described above, subsidized wages, grantees' administrative costs, and costs associated with training (including, but not limited to capital costs associated with outfitting cyber range infrastructure, instructor costs, curriculum development, materials and supplies, certification costs, etc.).

#### F. Performance Outcomes

1. MD Labor requires the below performance measures:
  - i. Total number of participants placed into training;
  - ii. Total number of participants who received hands-on training on a cyber range;
  - iii. Total number of participants who earned industry-recognized credentials;
  - iv. Total number of participants who completed training; and
  - v. Total number of participants placed into subsidized employment.

#### G. Reporting Requirements

1. Awardees must submit quarterly financial and narrative program progress reports to DWDAL. Templates for these reports will be provided by DWDAL as an attachment to the formal award.
2. Reports are due by the **Tenth** (10th) day of each month following the reporting period.
3. DWDAL will conduct regular programmatic and fiscal monitoring to ensure that activities of its service providers are on target to meet grant goals.

H. Invoice Requirements

1. Invoicing will be required as part of this grant. Invoice formats will be provided with the grant awards.

**III. Grant Staffing and Management**

The Awardee shall assign a Project Manager and appropriate staff to carry out the demonstration project.

**Section 3 – Proposal Format**

**I. Proposals**

One electronic copy of the proposal must be received by the Program Manager, at the following email address [mary.keller@maryland.gov](mailto:mary.keller@maryland.gov) no later than **11:59 PM (Eastern Time) on October 4, 2024** in order to be considered.

**II. Submission**

The proposal must include the Competitive Grant Proposal Narrative (*Attachment A*). All sections of the CGP Narrative form must be completed with as much detail as possible, and must include all partnership letters of commitment or letters of support as detailed above.

The Applicant must submit a detailed line item budget using the forms provided as *Attachment B* for their project's period of performance. Also include either a detailed cost analysis of each line item or a budget narrative that explains the costs reflected in each of the line items. Discuss here any items that need explanation. The budget must reflect the cost per participant.