

Request for Proposals

Addressing Cybersecurity Compliance Challenges to
Technology Adoption for the Maritime Industry (C3TAP-M)
RFP COVACCI-23.01:

DEADLINE DATES:

RFP ISSUE DATE: September 15, 2022

Last day for questions and answers about this RFP: October 14,
2022

Proposals due: Beginning November 1, 2022 and continuing until
five projects selected

Period of Performance: 12 Months following award

Supported by:

Coastal Virginia Center for Cyber Innovation

Commonwealth Cyber Initiative

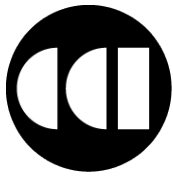
Old Dominion University

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Norfolk, Virginia 23529

(757) 683-5579

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Request for Proposals

C3TAP (COVACCI-23.01)

Virginia's Commonwealth Cyber Initiative (CCI) aims to create a Commonwealth-wide ecosystem of innovation excellence in cyber-physical systems (CPS) with an emphasis on trust and security. Certified as a node of CCI, the Coastal Virginia Center for Cyber Innovation (CoVA) seeks to:

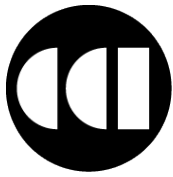
- Conduct fundamental research that will lead to breakthroughs in CPS security (CPSS), contributing to the CCI mission of establishing Virginia as a global leader in secure CPS and in the digital economy,
- Foster and accelerate commercialization of CPSS innovation in order to grow and diversify the Virginia cyber economy, and
- Expand and diversify the cybersecurity talent pipeline through investments in research capabilities and commercialization efforts.

I. Objective

The Cybersecurity Compliance Challenges to Technology Adoption for the Maritime Industry (C3TAP-M) opportunity addresses the barriers to technology adoption in the maritime industry due to or related to cybersecurity compliance issues. Projects funded by C3TAP-M will develop a product or concept that overcome or mitigate cybersecurity impediments to the adoption of new technologies such as cloud computing, 5G connectivity, and machine learning, by the shipbuilding and repair industry. C3TAP-M supports and aligns with the cutting-edge research led by COVA CCI in addressing real-world cybersecurity needs of the transportation and maritime sectors and advances the digital transformation of the regional maritime industry.

Examples of possible proposals include (but are specifically not limited to) the following concerns identified through the COVA CCI funded Cybersecurity Barriers to Technology Adoption Project:

1. Advancing the adoption of newer technologies such as AI, 5G, and Cloud Computing by the shipbuilding industry under the constraints of the DoD-mandated Cybersecurity Maturity Model Certification (CMMC).
2. Partnering with a regional shipbuilding firm and/or its suppliers, identify a specific technology of interest and the required components.



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In relation to existing systems, map those requirements to the NIST controls/CMMC compliance requirements and all approved suppliers.

3. Creation of a cyber-roadmap or handbook for maritime supplies/components which demonstrates and provides a repeatable and scalable process model for compliance with CMMC regulations.
4. Qualifying the risk associated with non-compliance of CMMC requirements by suppliers of a major shipbuilding or ship repair firm. Identifying a sample of critical components to ship construction and/or repair, assess the related suppliers to determine current level of CMMC compliance and the potential risk to the supply chain.

II. Eligibility

COVA CCI business partners, formal regional organizations, faculty members, researchers, and university administrators may submit proposals. Students initiated proposals must be led by a faculty member affiliated with a COVA CCI academic institution. All proposals must include participation by a maritime industry partner (ie., a member of the shipbuilding, ship repair, or ship modernization industry cluster located in Southeastern Virginia).

III. Awards

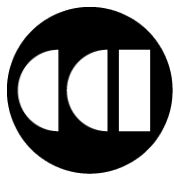
The maximum amount of funding per project is \$100,000. Submissions for funding greater than \$100,000 will be rejected without review. Up to five total projects will be considered. Initial proposal reviews will begin on November 1, 2022. Two to three projects are expected to be awarded during CY 2022 with remaining projects selected during the first quarter of CY 2023. Proposals may be submitted until five projects have been selected. All projects must be completed within a 12-month period of performance beginning with award.

IV. Award Conditions

Selected applicant(s) are expected to participate fully in COVA CCI activities including providing materials needed for reports, participation in COVA CCI meetings, and responding to data collection requests by COVA CCI. All publications and presentations resulting from the grant should acknowledge support from Coastal Virginia Center for Cyber Innovation (COVA), Commonwealth Cyber Initiative (CCI).

V. Proposal Format

Proposal must use 1-inch margins, 11-point font or larger and single line spacing.



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1. Title Page (one page)

Use the provided Title Page which included name of RFP, Project Title, Project Abstract (no more than 250 words), total budget amount, and name, institution and contact information of PI and Co-PIs.

2. Proposed Project (up to 4 pages unless otherwise specified)

- Description of the project. Objectives, methodology, milestones, and timeline. Identify if different tracks are available for consideration.
- Discussion of alignment of the project with CCI and COVA CCI objectives. If applicable, provide information on the commercialization plan and how it advances the field of study.
- Measures of success. What are the key performance indicators and how will success be measured and tracked?
- Other areas of consideration. The RFP can provide other specific guidance as needed to define the scope of project.

3. Budget (up to 4 pages)

Use the provided Budget Summary Worksheet to capture overall project budget. Provide a budget justification. Participation at CCI and COVA CCI events is expected; travel costs to support project team attendance at CCI Events may be included in the budget.

4. Biographies.

Include biographies of PI, Co-PI and other key project personnel. Up to 2 pages each using the NSF format.

5. Letters of Commitment/Support (not counted in total page count).

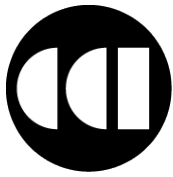
If applicable, provide letters of commitment/support.

VI. Schedule

- Request for Proposal Released: September 15, 2022
- Q&A period ends: October 14, 2022
- Proposals due: Beginning November 1, 2022 and continuing until five projects are awarded
- Award Notification: As selected
- Period of Performance: 12 months beginning with project award

VII. Proposal Submission

Proposals must be submitted via email to jcostanz@odu.edu not later than



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the close of business on date specified above in section VI. Schedule. Late submissions will not be considered. Proposals must be submitted as a single PDF file.

VIII. Evaluation Criteria

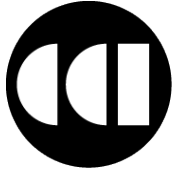
A committee of individuals, selected for their experience, will review each proposal and make funding recommendations to the COVA CCI Executive Director.

Evaluation Criteria include:

- Alignment with COVA CCI goals and objectives.
- Includes COVA CCI partner institution and a member of the regional shipbuilding, ship repair, or ship modernization industry.
- Intellectual Merit. Advances knowledge and understanding within the field of cybersecurity compliance as it relates to digital transformation of maritime industry.
- Broader Impacts. Benefits the Commonwealth, CCI, or COVA CCI outcomes, including improvements in diversity and inclusive representation.
- Commercialization. Results in viable product or concept that leads to commercialization through pursuit of Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) grants.
- Responsiveness to maritime industry priorities and business needs, including advancement of cybersecurity compliance, technology adoption, and mitigation of supply chain risk.
- Project objectives and goals are clearly laid out and achievable, includes a project timeline and project deliverables, and describes required budget and resources.

IX. Questions and Point of Contact

Questions related to this project should be sent to John Costanzo via email (jcostanz@odu.edu). A list of Frequently Asked Questions (FAQs) is provided.



**Commonwealth
Cyber Initiative**
COASTAL VIRGINIA

**2123 Monarch Hall
Hampton Boulevard
Norfolk, Virginia 23529**

**Addressing Cybersecurity Compliance Challenges to
Technology Adoption for the Maritime Industry (C3TAP-M)**

RFP COVACCI-23.01

Project Title:

Project Abstract (no more than 250 words):

Total Requested Amount:

Project Investigators:

| PI Name | Institution | Department | Phone Number | Email |
|---------|-------------|------------|--------------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |



Project Budget Worksheet

I. Proposal Information

| | |
|--|--|
| a. Sponsor Name: | |
| b. RFP Name: | |
| RFP Number: | |
| c. Sponsor Deadline: | |
| d. Project Name: | |
| e. Overall PI Name/Institution: | |
| f. Institutional PI/Co-PI Name/Institution: | |
| g. Project Start Date: | |
| h. Project End Date: | |
| i. Total Project Budget: Auto calculates from costs identified below. | |

II. Labor Costs

a. Faculty: List total cost for all faculty supporting the project by academic institution. Include salary based on level of effort for each faculty.

| Institution | Total Salary |
|--------------|--------------|
| | |
| | |
| | |
| | |
| Total | \$ |

b. Support Staff / Post-Docs / Research Scientists / Lab Managers / Hourly

List total cost for all support staff, etc., supporting the project by academic institution. Include salary and fringe benefit based on level of effort for each faculty. Each institution has their own fringe rate and this rate will be used in calculating total fringe.

| Institution | Total Salary |
|--------------|--------------|
| | |
| | |
| | |
| | |
| Total | \$ |

c. Graduate Research Assistants (GRAs)

List total cost for graduate research assistances by institution.

| Institution | Total |
|--------------|-----------|
| | |
| | |
| | |
| | |
| Total | \$ |

Include tuition in budget? (Select Yes or No) Yes No

d. Fringe Benefits: Include fringe benefit based on level of effort for each faculty and staff. Each institution has their own fringe rate and this rate will be used in calculating total fringe. ODU Fringe rate for CCI funded projects is 23.25% + 12,000

Calculations: Annual Salary x Fringe Rate (.2325 + 12000) x % of effort = Total Fringe

| Institution | Total |
|--------------|-----------|
| | |
| | |
| | |
| | |
| Total | \$ |

III. Other Direct Costs

Use the table below to plan other expenses are needed to accomplish the project. Include institution receiving funding in the description along with a brief description of the item requested.

| Category/Description | Total Budget |
|--|--------------|
| a. Equipment | |
| | |
| b. Materials & Supplies | |
| | |
| c. Travel | |
| | |
| d. Subcontract & Consultant | |
| | |
| e. Other Expenses | |
| | |
| Total Other Direct Costs | \$ |

IV. Subcontractors / Consultants

If you will need any subcontractors or consultants for your project, please provide the following information.

| Company Name: | Contact Name/e-mail: |
|---------------|----------------------|
| | |
| | |
| | |

V. Budget Summary

Include a budget summary showing total costs by category as calculated above. All cells in this table will auto calculate.

| Category | Amount |
|---------------------------------|-----------|
| II. Labor Costs | |
| a. Faculty | \$ |
| b. Support Staff | \$ |
| c. Graduate Research Assistants | \$ |
| d. Fringe Benefits | \$ |
| Total Labor Costs | \$ |
| III. Other Direct Costs | |
| a. Equipment | \$ |
| b. Materials & Supplies | \$ |
| c. Travel | \$ |
| d. Subcontract/Consultant | \$ |
| e. Other Expenses | \$ |
| Total Other Direct Costs | \$ |
| Total Budget | \$ |

VI. Contact Information

Send this form to jcostanz@odu.edu



COVA CCI – Request for Proposals Frequently Asked Questions

FAQs

| | |
|--|---|
| 1. What is allowable for CCI sponsored projects – use of funds? (VRIC, 2019)... | 1 |
| 2. What is unallowable for CCI sponsored projects – use of funds? (VRIC, 2019)..... | 2 |
| 3. What other restrictions or other allowable use of funds have been placed on CCI sponsored projects? (VRIC, 2019)..... | 3 |
| 4. Who submits the proposal when multiple institutions/organizations are working together?..... | 4 |
| 5. How are project budgets calculated?..... | 4 |
| 6. Publication acknowledgement for CCI sponsored activities. | 4 |
| 7. For Old Dominion University faculty/staff only..... | 4 |
| a. Are COVA CCI projects managed by ODU Research Foundation? | 4 |
| b. Can research faculty use COVA CCI funded projects for research conversion contracts? | 5 |
| c. No, since this project is managed by Academic Affairs and it is not eligible to be used for 12-month conversions for research faculty. | 5 |
| d. How do I hire a Graduate Research Assistant?..... | 5 |
| e. What is the COVA CCI Budget Code? | 5 |
| f. How do I spend funds awarded through COVA CCI?..... | 5 |
| References | 5 |

1. What is allowable for CCI sponsored projects – use of funds? (VRIC, 2019)

- Cybersecurity and CPSS-focused experiential learning opportunities (internships, research experiences, etc.) for undergraduate and graduate students enrolled at public institutions; A program that informs and prepares undergraduate and graduate students enrolled in public institutions of higher education to obtain security clearances (program created once and then disseminated across all Nodes)
- Alignment of undergraduate cybersecurity and CPSS-focused degree program content across Node institutions and with industry needs (as described in the Blueprint)
- Expansion of curricula at the Cyber Range



- Expansion of programming at the Cyber Range for PK-12 teachers and community college faculty to promote its use
- Shared research resources, such as test beds, secure networks, etc., described in Node applications
- Cross-Node visiting researcher program
- Build-out of technology transfer office cybersecurity and CPSS expertise; expertise to be shared within the Node and/or across the Network
- Scouting for cybersecurity and CPSS inventions
- Patent costs for cybersecurity and CPSS inventions
- Customer discovery programs; NSF i-Corp-style and i-CAP programs for cybersecurity and CPSS-focused products of research
- Other support for commercialization of the products of Node-based cybersecurity and CPSS research
- Collaborative activities across Nodes related to institutional IT security, technology needs of researchers, mutual support agreements, incidence response, etc.

2. What is unallowable for CCI sponsored projects – use of funds? (VRIC, 2019)

Any Node-contributed funds used for the following activities shall not be offered as the basis for CCI matching funds. CCI matching funds shall not be used for the following activities.

- Any activity restricted by law, regulation, policy, etc., for the use of state funds (e.g., alcohol, lobbying, etc.)
- Activities at private PK-12 schools
- Any costs associated with undergraduate degree growth
- Any costs associated with designing new undergraduate degree programs
- Costs of developing and delivering undergraduate capstone programs, except as part of the larger effort to align cyber and CPSS-focused undergraduate program content with industry needs listed under Allowable, above.
- Portion of salaries and benefits of faculty for time spent teaching undergraduates, including teaching cyber-related courses
- Fees for security clearances
- Programs for veterans to transition to cyber and CPSS careers (the Commonwealth has already funded programs such as these)
- Professional development for incumbent IT workers to gain cybersecurity proficiencies and certifications (the Commonwealth has already funded programs such as these)
- Develop post-baccalaureate certificate program for graduates who majored in other fields to gain proficiency in cybersecurity and CPSS
- Scaling of digital fluency across all undergraduate majors
- Scholarships for costs of attendance at institutions of higher education



- Stand-alone technology transfer office dedicated only to serving commercialization of Node research

3. What other restrictions or other allowable use of funds have been placed on CCI sponsored projects? (VRIC, 2019)

- CCI funds should be used to build capacity and develop platforms for multifaceted programs, rather than to fund individual research projects (in accordance with the recommendation of the CCI Leadership Council)
- *Talent Pipeline*: Before including a Talent Pipeline strategy and associated initiatives in the budget request, Nodes should ensure alignment with the VRIC work group's discussion explained under Node Strategic Plans, above.
- *Private Institutions of Higher Education (non-profit and for-profit)*:
 - Experiential Learning: No CCI funds may be used for payments to students enrolled in private institutions of higher education for experiential learning opportunities. Payments to those students from other sources shall not count as the basis for the match of CCI funds.
 - If CCI funds are expended on shared infrastructure located at a public institution of higher education, then private institutions may also use those resources.
 - Nodes may contract with private institutions to provide access to resources for faculty at, and students enrolled in, public institutions.
- *Public PK-12 School Systems*: VRIC work group members remind Nodes that PK-12 funding for activities similar to those described in Node applications has routinely been removed from the state budget by the General Assembly. Therefore, caution is advised in requesting funding for PK-12 activities.
 - Developing cyber and CPSS-focused curricula and delivering it to PK-12 public school teachers is an allowable use of funds (created once and disseminated).
 - Cyber and CPSS-focused research experiences at public institutions of higher education for PK-12 teachers is an allowable use of funds.
 - Camps for kids, career exploration fairs and/or other programs that promote general tech sector careers (even those with a cybersecurity component) are usually an unallowable use of funds; however, VRIC will consider meaningful, rigorous, cyber- and CPSS-specific activities for PK-12 students on a case-by-case basis.
- *Virginia Space Grant Consortium*: The funds provided by the state to VSGC, including GO Virginia funds, shall not count as Node-contributed



funds offered as the basis for CCI matching funds. Nodes may contract with VSCG to provide services to the Node.

- *Indirect Costs and/or Facilities & Administration Costs:* CCI funds shall not be used for facilities and administration costs (i.e., indirects). Nodes may offer unrecovered F&A as the basis for matching funds, separately calculated for each of the four broad categories.
- *Endowments:* CCI funds shall not be placed in an endowment; expenditures from an endowment may count as Node-contributed funds offered as the basis for CCI matching funds.

4. Who submits the proposal when multiple institutions/organizations are working together?

All proposals must have a lead Principal Investigator and institution/organization identified. The PI will submit the final proposal on behalf of all partner institutions/organizations. The PI needs to ensure that all partners provide the required budget requirements and other documents as specified in the RFP. The proposal must also clearly identify the principal investigator and any co-PI(s) for the project.

5. How are project budgets calculated?

The COVA CCI Project Budget Worksheet will be used to report the budget costs and to provide justification.

- Click her for the [Norfolk State Office of Sponsored Programs](#). (NSU Office of Sponsored Programs)
- Click here for the [Old Dominion University Research Foundation budget guidance](#). (ODU Guide to Creating Budgets)
- Click her for the [William & Mary Office of Sponsored Programs](#). (W&M Office of Sponsored Programs)

6. Publication acknowledgement for CCI sponsored activities.

Use this language in all publications submitted as part of CCI sponsored activities:

“This work was supported [in part] by the Commonwealth Cyber Initiative, an investment in the advancement of cyber R&D, innovation and workforce development. For more information about CCI, visit cyberinitiative.org.”

7. For Old Dominion University faculty/staff only.

a. Are COVA CCI projects managed by ODU Research Foundation?

Research projects funding by COVA CCI, CCI, or other CCI Nodes will be managed through the ODU Research Foundation.



b. Can research faculty use COVA CCI funded projects for research conversion contracts?

c. No, since this project is managed by Academic Affairs and it is not eligible to be used for 12-month conversions for research faculty.

d. How do I hire a Graduate Research Assistant?

Hiring of students (undergraduate and/or graduate) students for projects that are being managed through ODURF will use the appropriate ODURF hiring procedures and guidelines.

e. What is the COVA CCI Budget Code?

The COVA CCI budget code is 5CCN5.

f. How do I spend funds awarded through COVA CCI?

Funds for projects managed by ODURF will execute funds through the ODURF Portal.

References

NSU Office of Sponsored Programs. (n.d.). Retrieved from Norfolk State University: <https://www.nsu.edu/Academics/Faculty-and-Academic-Divisions/Schools-and-Colleges/School-of-Graduate-Studies-and-Research/Sponsored-Programs>

ODU Guide to Creating Budgets. (n.d.). Retrieved from Old Dominion University Research Foundation: <http://www.researchfoundation.odu.edu/grantscon/createbudget.html>

VRIC. (2019, August 13). *VRIC Meetings*. Retrieved from SCHEV: <https://www.schev.edu/docs/default-source/VRIC/2019-08-13/agenda-item-7b---cci---guidance-to-regional-nodes---requests-for-funding.pdf>

W&M Office of Sponsored Programs. (n.d.). Retrieved from William & Mary: <https://www.wm.edu/offices/sponsoredprograms/index.php>