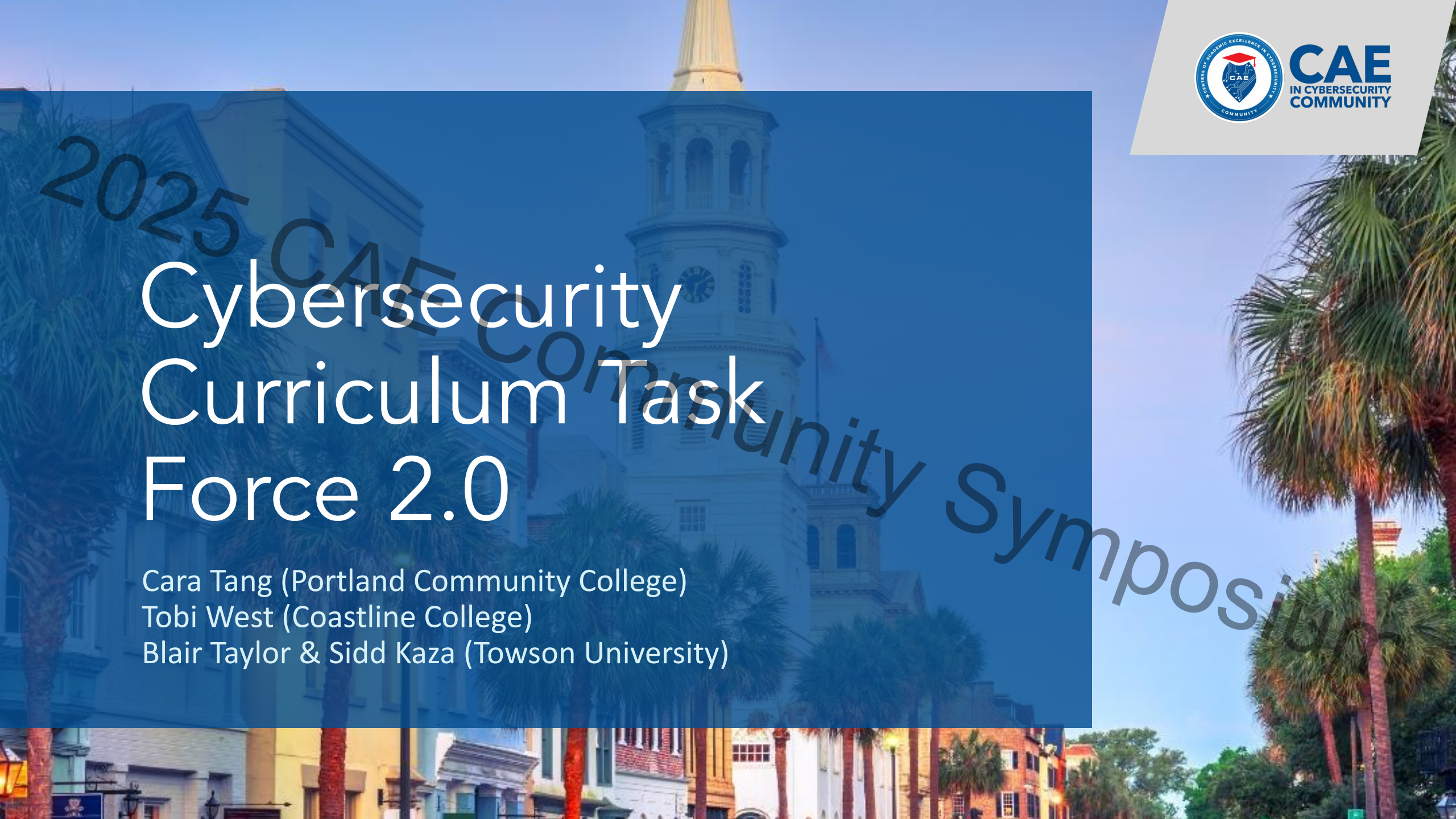


2025 CAE Community Symposium

Cybersecurity Curriculum Task Force 2.0

Cara Tang (Portland Community College)
Tobi West (Coastline College)
Blair Taylor & Sidd Kaza (Towson University)

Outline

- Cybersecurity Curriculum Task Force (2021 – 2024)
  - Work completed
  - Where to find curriculum
- Cybersecurity Curriculum Task Force **2.0** (2024 – 202?)
  - Work initiated
  - Opportunities

2025 CAE Community Symposium

Cybersecurity Curriculum Task Force, 2021-2024

Task Force

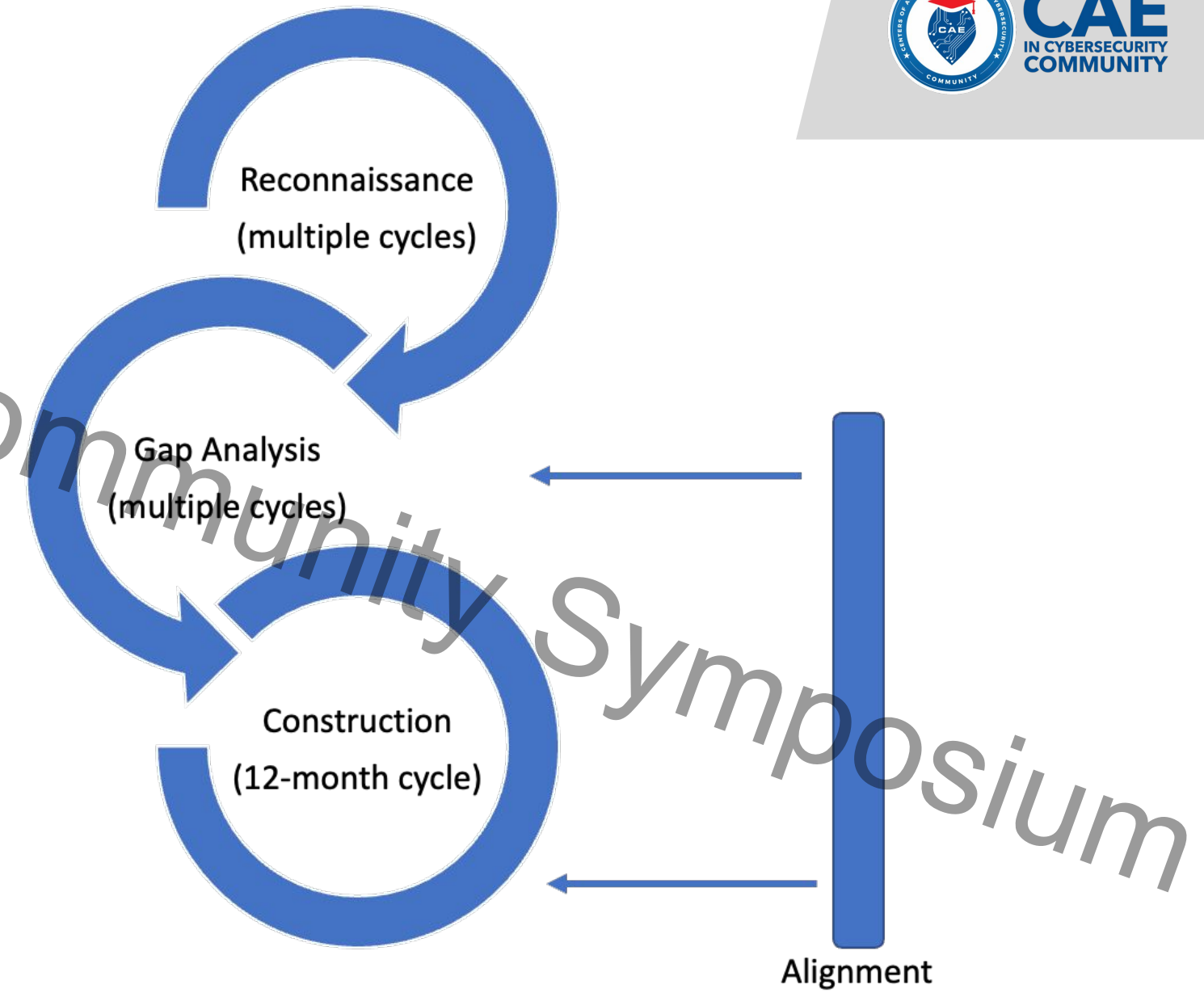
- Towson University - Sidd Kaza, Blair Taylor
- Portland Community College - Cara Tang
- United States Naval Academy - John Doherty
- Cedarville University - Seth Hamman
- Coastline College - Tobi West
- Metropolitan State University - Faisal Kaleem
- University of New Haven - Tirthankar Ghosh

Mission

Catalog and create high-quality and relevant curricula on emerging cyber topics, mapping to curricular and workforce guidelines, and make them freely available.

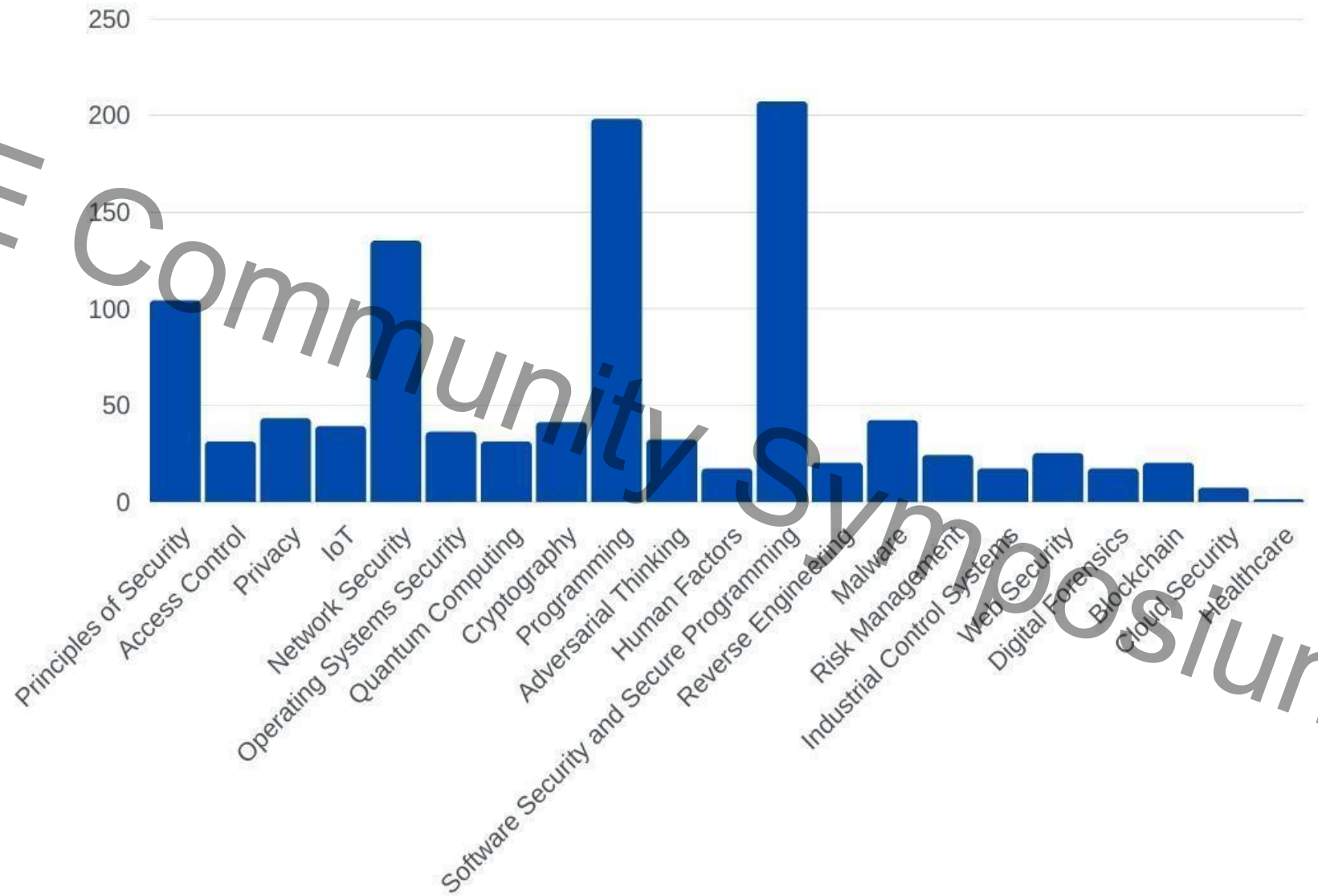
https://cyberedtaskforce.org

Organization



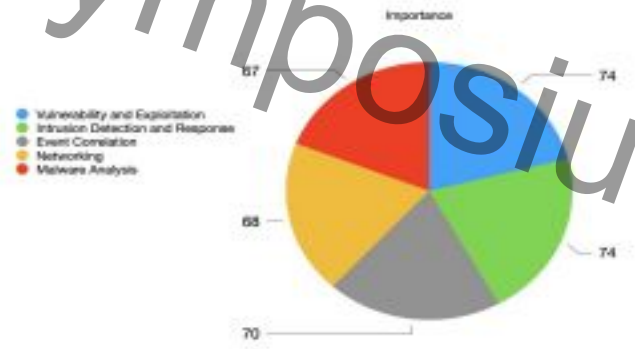
Reconnaissance

- ✔ 1300+ learning objects
- ✔ 25 topics
- ✔ 3000+ resources



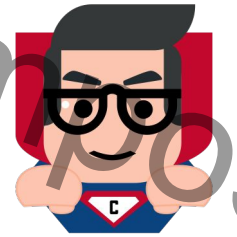
Gap Analysis

- Industry focus groups
- Survey to identify top knowledge & skills in each area
  - Quantum resistant cryptography
  - Autonomous / self-driving vehicle security
  - Zero trust
  - Software supply chain security
  - Ransomware



Construction

- Several rounds of proposals funded
- Most with a 1-year timeline
- Mid-term check
- Technical and editorial review
- Available on CLARK



Institutions Funded (Over 600K Awarded)

Construction Topics

- Zero trust security
- Ransomware
- Quantum Resistant Cryptography
- Software Supply Chain Security
- AI and LLMs for Cybersecurity
- Security for AI
- Autonomous and Connected Vehicles
- DevSecOps and Secure Software development
- Autonomous Vehicle Security
- Medical Device Security
- Ransomware: Prevention, Detection, and Recovery

All Curriculum Available on CLARK

CAE IN CYBERSECURITY COMMUNITY

Part of the NSA NCAE-C Initiative collection

Zero Trust Security

Last Updated 9/5/23

Course ☆ ☆ ☆ ☆ ☆

Parent of Zero Trust Architecture in Government Networks. + 9 more

Description

This course will explore the concepts of zero trust architecture. Students will learn the underlying concepts of zero trust. Students will learn how to plan and implement a zero trust architecture that meets regulatory requirements.

CLARK

Learning Outcomes

Define zero trust principles No Mappings	0 Mapped Outcomes
Configure a zero trust architecture No Mappings	0 Mapped Outcomes
Manage a zero trust architecture No Mappings	0 Mapped Outcomes
Analyze the different aspects of zero trust No Mappings	0 Mapped Outcomes

2025 CAE Community Symposium

Cybersecurity Curriculum Task Force 2.0

Task Force

- Towson University – Sidd Kaza, Blair Taylor, Mahnaz Moallem
- Portland Community College – Cara Tang
- United States Naval Academy – Dennis Diaz, John Doherty
- Cedarville University – Seth Hamman
- Coastline College – Tobi West
- Metropolitan State University – Faisal Kaleem
- University of New Haven – Tirthankar Ghosh
- Tennessee Tech – Maanak Gupta
- University of Arizona – Paul Wagner

Mission

Create high-quality and relevant curricula on emerging cyber topics, including AI and Secure Coding, mapped to the NICE and DCWF frameworks and CAE-C Knowledge Units, and make them freely available

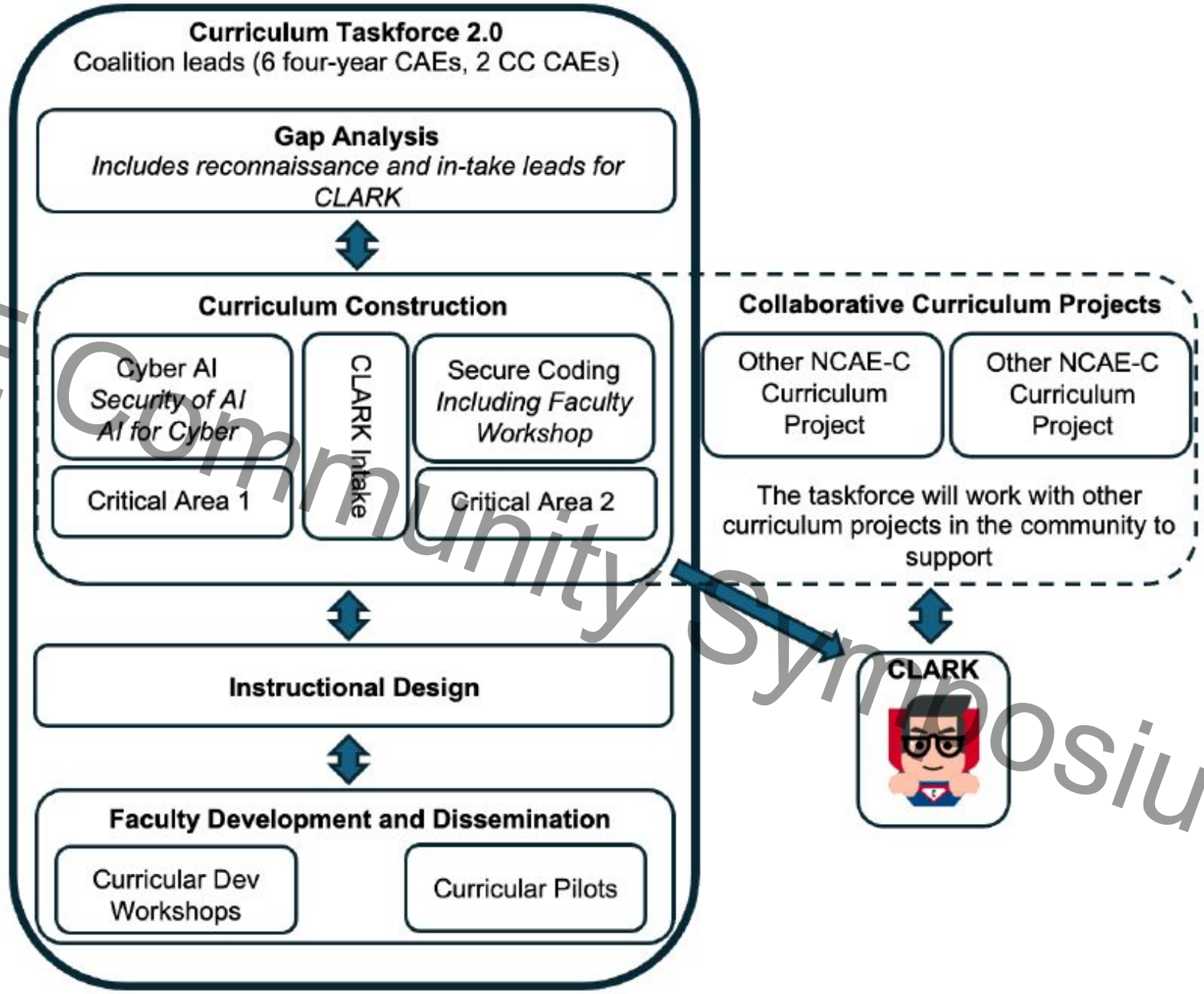
Framework

- Broaden the work of Taskforce 1.0
  - Build on successful foundation and processes
  - Identify additional high-need areas
- Develop and share high-impact curricula
  - Create and distribute high-value curricula in AI, Secure Coding, and other critical areas
- Ensure relevance and consistency with learning sciences research
  - Review and update materials
  - Incorporate instructional design best practices
- Foster collaboration with existing initiatives
  - Enhance the impact of resources and initiatives like CLARK, Competency Constructor, and NCyTE

Organization

- Gap Analysis Subcommittee
  - Identify gaps with CAE KUs and NICE & DCWF frameworks
- Construction Subcommittee
  - Develop new curricula in AI, Secure Coding, and at least 2 other topics identified by gap analysis
- Instructional Design Subcommittee
  - Work with curriculum developers to ensure research-based learning science and design principles are applied
- Faculty Development and Dissemination Subcommittee
  - Faculty development workshops, curriculum pilots, dissemination on CLARK, etc.

Organization



Work So Far

- Initiating processes and collaborations for curriculum in Secure Coding and AI
- Initiating gap analysis
- Relevance - micro grants for updating curriculum

Opportunities

- Watch for opportunities as emerging high-need, high-impact areas are identified and curriculum developers are sought
- Watch for faculty development or pilot opportunities with new curriculum
- Watch for completed curriculum to be published on CLARK

Questions?

Cybersecurity Curriculum Task Force 2.0

CAE Symposium 2025, Charleston, SC