

Morgan State University Capability Statement

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1.) Institutional Overview

At a Glance

- **Name:** Morgan State University
- **Location:** Baltimore, Maryland
- **Founded:** 1867
- **Enrollment:** 11,500
- **Classification:** Comprehensive, Public HBCU
- **Graduate Programs:** 32 Master's Programs; 41 Doctoral Programs

Primary IAA Program Contact

- **Name:** Albert E. Sweets
- **Title:** Director, External Research Partnerships
- **Email:** albert.sweets@morgan.edu
- **Phone:** 443.885.2057

Strategic Alignment with State Priorities

- Morgan is committed to advancing Maryland's priorities in inclusion, social mobility, innovation, economic development, and community impact. Through its faculty, research centers, exceptional capabilities and talented student body and alumni, Morgan is well-positioned to support State agencies with high-quality services delivered under Interagency Agreements (IAAs).

2.) Core Capability Domains

Morgan State University offers contract-ready services across the following:

- Data, Evaluation & Analytics
 - Program evaluation, performance measurement, survey design and analysis, outcomes research
- Economic & Policy Research
 - Economic impact studies, cost-benefit analyses, policy briefs, equity assessments
- Cybersecurity & AI/ML
 - IT process mapping, cybersecurity assessments, AI/ML readiness/use case advising, automation strategy
- Training, Professional Development & Capacity Building
 - Custom training for State staff, workshops, curriculum development, leadership development; workforce development, evaluation and assessments
- Communications, Outreach & Community Engagement

- Public information campaigns, stakeholder engagement, community meeting facilitation, survey outreach
- Specialty Domains (Institution-Specific)
 - Marine Biology & Coastal Resilience; & Environmental Science; Urban Policy & Planning; Urban Transportation; Health Disparities & Community Health; Social Work, Electronic Materials; Embedded Systems; Urban Planning; GIS; Data Analytics; Engineering, Optics, Cybersecurity, Educational Disparities, Artificial Intelligence & Machine Learning, Predictive Analytics, Animal Laboratory Research

3.) Representative Services and Offerings

Under these domains, Morgan State University can provide services such as:

- Program impact assessments and evaluation reports
- Survey and data collection design, implementation, and analysis
- Economic impact and cost-benefit analyses for State initiatives
- Cybersecurity and IT readiness assessments
- AI/ML readiness advising and identification of low-risk, high-impact use cases
- Design and delivery of customized training for State employees
- Public outreach materials, stakeholders and community engagement support
- Human behavior
- Environmental, marine, or climate science studies
- Technical/Entrepreneurial for community
- Basic & Applied Research

4.) Representative Past Performance and Experience

- **Research and Education in Equitable AI and Machine Learning: Cybersecurity Implications for National Defense – Office of Naval Research**
 - **Scope:** Performed research on various Projects in AI/ML. Provided education and training for the next generation of AI/ML Engineers
 - **Role:** Evaluation, research, training, and consulting
 - **Outcomes:** More than 400 Engineering and Computer Science students trained. Team testified to both State & Federal lawmakers on Ethical AI
- **Maternal Health Research Network for Minority Serving Institutions – Health Resources & Services Administration**
 - **Scope:** Perform research regarding improving maternal health
 - **Role:** Coordinating Center for the 16 Member Research Institutions to build the

capacity of the research centers.

- **Outcomes:** Developing models focused on preventing serious maternal illness and deaths
- **Strontium-Yttrium Multijunction PIN-based High-density Output Nano-system for Extreme Environments - DARPA**
 - **Focus Area:** Perform fundamental and non-fundamental research to develop a long-life high-power radio voltaic technology.
 - **Relevance to State Work:** These technologies are critical because autonomous unmanned applications in water and air require high, unattended, continuous power.

5.) Research Centers, Labs, and Institutional Assets

Morgan State University brings specialized research and operational capacity through:

- **Cybersecurity, Assurance & Policy Center – Cybersecurity (Hardware & Software) Embedded Systems**
 - CAP is a National Center of Academic Excellence in Cybersecurity in Cyber Defense Education (NCAE-CD). This designation signifies our commitment to developing a skilled workforce to reduce vulnerabilities in national infrastructure and meet the needs of government, industry, and academia.
- **Center for Urban Health Equities – Healthcare**
 - To positively impact the root causes of urban health inequities through asset-based community-driven research and practice. Action-Oriented Scholarship, Meaningful Relationships, Honest Communication and Transparency, Community-Based Strengths, and Diversity.
- **Center for Equitable AI/ML Systems – Artificial Intelligence & Machine Learning**
 - Facilitates research, the development of standards, the identification of new methods, and the advancement of innovative technologies that benefit everyone on the planet. CEAMLS serves as an interdisciplinary nexus for thought leadership in the application of fair and unbiased technology and its applications. The Center will remain rooted in scholarly stewardship, cultivating the next generation of students at all levels, as well as lifelong learners across industries and areas of study.
- **Center for Urban Violence & Crime Research – Gun Violence, Crime,**
 - Established to study and develop solutions to reduce crimes related to violent crime in urban environments and the impacts of education and health disparities.

- **National Center for Elimination of Educational Disparities – K-12 education reform**
 - Committed to having a positive impact on academic achievement and equity in the Baltimore community, the State of Maryland, and the nation. NCEED’s work is focused on eliminating disparities in the educational outcomes of K-12 students. As a national interdisciplinary research center, NCEED is driven by its mission to undertake research that addresses critically important questions related to the academic, social, and emotional outcomes of all children.
- **Center for Education & Research in Microelectronics**
 - Research focuses on the fabrication side is wide bandgap and ultra-wide bandgap materials and devices with an emphasis on applications in high power, quantum sensors, and biological devices. These applications for advanced materials are given a new life by the hetero-integration approaches that will be employed in the center.
- **Data Analytics & Sports Gaming Research – Data Analytics**
 - Pioneering data analytics research for problem gambling, responsible gaming, and consumer protection, shaping policy and empowering stakeholders. To advance evidence-based solutions through innovative research, support affected communities, and have positive societal impact.
- **Center for Urban & Coastal Climate Science – Climate, Environmental**
 - Environmental Science – conducts coastal and urban resilience, water quality, and ecosystem research.
- **Patuxent Environmental & Aquatic Research Laboratory (PEARL) – Environmental**
 - Marine & Environmental Science – conducts coastal resilience, water quality, and ecosystem research. Research is designed to increase the understanding of coastal and environmental systems so that they can be properly managed and protected.
- **National Transportation Center – Traffic Safety, Urban Mobility**
 - Dedicated to addressing social issues related to transportation through a robust program of research and technology transfer, bringing together a wide variety of stakeholders to advance solutions in mobility.
- **Pearl – Healthcare**
 - [e.g., “Institute for Marine & Environmental Science – conducts coastal resilience, water quality, and ecosystem research.”]
- **Center for Predictive Analytics – Psychology**

- The CPA plays an integral role in presenting cutting-edge psychometric methodologies to faculty & students, and provides training to increase faculty & student skill sets related to predictive analytics. We also develop surveys, design projects, and conduct detailed program evaluations.

- **Relevant Schools/Departments**

- College of Liberal Arts, School of Architecture & Planning, School of Business & Management, School of Engineering, School of Computer, Mathematics and Natural Sciences, School of Community Health & Policy, School of Education & Urban Studies, School of Engineering, School of Journalism & Communications, School of Graduate Studies, School of Social Work, Animal Research Facility

These assets enable Morgan State University to deliver high-quality, research-based services under Interagency Agreements.

6.) Innovation and Future Focus

Morgan State University is actively investing in the capabilities Maryland agencies will need over the next 10-20 years.

- **Current Innovation Priorities**

- Expanding capacity in data science, AI/ML, and advanced analytics to support evidence-based policymaking.
- Strengthening interdisciplinary work at the intersection of climate resilience, public health, and community development.
- Building deeper integration between academic programs and real-world State projects through applied research and practicum models.

- **Emerging and Planned Specialized Capabilities (10-20 Year Horizon)**

- Develop or expand existing programs focused on cybersecurity policy, coastal and marine resilience, technological innovation, smart infrastructure, brain science.
- Increase faculty and graduate research capacity through our strategic research centers.
- Enhance applied learning (internships, fellowships, project-based learning) that directly support State agency projects.
- Strengthen partnerships with industry, government, and community organizations to co-create solutions in economic development, equity in service delivery, climate adaptation, digital government.

- **Future Value to State Agencies**

- More complex, multi-disciplinary engagements that combine research, data, policy, technology, and community engagement.

- Long-term research and advisory relationships that support strategic planning, innovation pilots, and policy design within the state and the federal government.
- A sustained talent base of graduates trained in the skills Maryland needs for its future workforce.

7.) Geographic and Community Outreach

Morgan State University has deep ties to communities across Maryland, including:

- **Primary Service Region(s):** Anne Arundel, Baltimore City, Baltimore County, Harford County, Howard County, Prince George’s County, Howard County
- **Community Partners:** Local governments, nonprofits, business associations, other Universities
- **Focus:** Advancing equity, supporting small businesses, improving health outcomes, strengthening coastal communities
- Contributions more than \$1.0B to the Maryland economy annually

The community footprint provides State agencies with a partner that understands local context and can engage stakeholders effectively.

8.) IAA Engagement Readiness

Morgan State University is prepared to perform work under Interagency Agreements (IAAs) for:

- Research, evaluation, and data analytics
- Consulting and advisory services
- Training and professional development
- Technical assistance for programs and initiatives
- Environmental, marine, agricultural, or specialty projects

9.) Primary Contacts

- **Programmatic and Contract/IAA Contact**
 - Name: Albert E. Sweets
 - Title: Director, External Research Partnerships
 - Email: albert.sweets@morgan.edu
 - Phone: 443.885.2057

10.) Key Personnel (Abbreviated)

- Dr. Kim Sydnor – Dean, Center for Urban Health Equities
 - Expertise: Public Health, Community Engagement
- Dr. Kofi Nyarko – Director, Center for Artificial Intelligence & Machine Learning Systems
 - Expertise: Electrical Engineering (Computer vision, Software, AI/ML)

- Dr. Kevin Kornegay – Director, Cybersecurity, Assurance & Policy Center
 - Expertise: Electrical Engineering (Computers, Embedded Systems, Hardware)
- Dr. Michael Sinclair – Center for Urban Violence & Crime Reduction
 - Expertise: Social Work
- Dr. Mansoureh Jeihani – Director, National Transportation Center
 - Expertise: Transportation Engineering, Urban Mobility
- Dr. Meria Carstarphen – Director, National Center for the Elimination of Educational Disparities
 - Expertise: Education, K-12