



Critical Infrastructure Resilience Institute (CIRI)

A Nationwide Consortium Led by University of Illinois Urbana-Champaign

A DHS Center of Excellence

From natural disasters to deliberate attacks by hostile entities, critical infrastructure systems face a myriad of challenges. CIRI's interdisciplinary team delivers knowledge, tools, technologies, and solutions to the businesses and public entities that own and operate critical systems. CIRI's research and technology transition outputs are used by those owners and operators to enhance the security and resilience of our nation's critical infrastructure. CIRI's education and workforce development initiatives are preparing the nation's workforce for the challenges of today and tomorrow.

Research and Education Capabilities

- Building the business case for infrastructure development
- Informing the policy and regulatory environment
- Developing and deploying new technologies and solutions
- Education and training for the current and future homeland security workforce

About CIRI

LAUNCH	2015
PARTNERS	More than 40 academic and private industry partners
EXPERTISE	Business, computer science, data analytics, engineering, political science, public policy, and urban planning
DHS ALIGNMENT	U.S. Coast Guard (USCG), Cybersecurity and Infrastructure Security Agency (CISA), Federal Emergency Management Agency (FEMA), Federal Law Enforcement Training Center (FLETC), DHS Science and Technology Directorate (S&T)

Feedback from Our Partners

"CISA is the operational lead for federal cybersecurity and the national coordinator for critical infrastructure security and resilience. We lead the national effort to understand, manage, and reduce risk to our cyber and physical infrastructure. Through our collaboration and partnership with CIRI and their world class researchers and educators, we are able provide a more secure and resilient critical infrastructure for the American people."

David J. Nolan, Emerging and Advanced Technology Branch Chief, Emergency Communications Division, CISA

University Partners

Carleton University
Georgia Institute of Technology
New York University
Southern University and A&M College*
Texas A&M University*
Texas Tech University*
The Ohio State University
University of North Texas*
University of Southern California
University of Washington

*Minority Serving Institution (MSI)

Enterprise Partners

2wav, inc.
Aegis Global
The Aerospace Corporation
City of Los Angeles
City of New York
Department of Transportation
Endicott Consulting
Harris County
Heartland Science and Technology
Group
Institute of Navigation
Karthik Consulting, LLC
MicroChip Technology, Inc.
National Emergency Number
Association
National Institute of Standards and
Technology
Resilient Navigation & Timing
Foundation
Synclesis, Inc.
T-Mobile
Weiss Consulting



For a complete list of partners
and more information, please visit
www.ciri.illinois.edu

For more information on DHS
Centers of Excellence, please visit
www.dhs.gov/science-and-technology/centers-excellence



Impacts



Advancing the Interoperability and Security of NG911

Next Generation 911 systems will support many important capabilities that will significantly enhance the effectiveness of emergency response services across the country. As these next-generation systems from multiple vendors are acquired and deployed, it is critical that they provide seamless interoperability from the emergency caller all the way to the emergency responder. CIRI researchers are currently developing and deploying a sustainable testing and certification program that will assure that end-to-end interoperability of NG911 systems and components.



Enhancing Cybersecurity Education across the Nation

Our nation suffers from a critical shortage of educated and trained cybersecurity professionals while it faces increasing threats from sophisticated, well-financed, and well-armed cyber adversaries including nation-states. CIRI and partner institutions are addressing these challenges by developing modern cybersecurity curricula for delivery through a nationwide network of academic institutions and training providers.



Facilitating Standardized Cyber-Risk Management Processes

Companies of all sizes across various sectors are enhancing their cyber security through adoption and implementation of standardized cyber risk management processes such as the NIST Cyber Security Framework (CSF), which is rapidly becoming an international standard. CIRI is developing a cloud-based software application that simplifies conformance to the CSF, facilitating wide-scale adoption of the standard.



Advancing Research through Collaboration with MSIs

CIRI annually supports Summer Research Teams (SRTs) from Minority Serving Institutions (MSIs) from around the country. During 2023, CIRI is supporting two teams, including faculty and students from the University of North Texas (on site at CIRI) and Southern University Baton Rouge (remotely). The CIRI SRTs will present their summer work in a concluding (hybrid on site and virtual) Summer Research Workshop.