Building Cyber Resilience

Global Resilience Institute
at Northeastern University

Part of living in today's technologically-advanced world is taking advantage of the interconnectedness that these technologies provide. Advanced digital telecommunications and computing technologies in particular provide the connective and controlling infrastructure supporting such innovations as the World Wide Web, digital critical infrastructure control systems, the internet of things, cloud computing, and Big Data driven informatics and analytics.

Simultaneously, this new era of advanced telecommunication technologies comes with responsibility to protect our systems from cyber-attacks. The patterns of cyber-attacks observed in recent years show that all entities utilizing digital telecommunications technologies are becoming increasingly vulnerable. These threats are rapidly evolving and dangerous to our communities. Individuals, enterprises, and infrastructure systems. All are being targeted by sophisticated cyber actors.

The Global Resilience Institute (GRI) is at the forefront of developing the concept of Cyber Resilience and applying the relevant principles in the real world. Our mission includes developing and integrating leading innovations and best practices to create practical and affordable solutions for government and industries. Examples of this effort include working to design a separate resilient network for critical infrastructure operations to guard against electromagnetic pulse (EMP) threats to control systems for the energy grid, water and waste distribution, pipelines, evolving transportation systems, etc., as well as establish a backup network for incident response planning and develop a Major Cyber Incident Review Board modeled on the National Transportation System.

Given today's dynamic and volatile global atmosphere, resilience has become a foundational element in our society's growth. GRI's mission to reinforce resilience in cybersecurity is being realized through cooperation with various industry partners, as well as the Department of Defense's Army Research laboratory. Furthermore, our university-wide interdisciplinary institute at Northeastern University enables quality research needed to build a resilient cybersecurity environment. With the knowledge and capabilities to carry out our agenda of resilience, the Global Resilience Institute welcomes opportunities to collaborate with like-minded entities to contribute to building a more resilience world.

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About GRI

Launched in 2017 with the approval of Northeastern University's Board of Trustees, the Global Resilience Institute (GRI) is the world's first university-wide institute to respond to the resilience imperative. Today, GRI undertakes multi-disciplinary resilience research and education efforts that draws on the latest findings from network science, health sciences, coastal and urban sustainability, engineering, cybersecurity and privacy, social and behavioral sciences, public policy, urban affairs, business, law, game design, architecture, and geospatial analysis.