

# CYBERSPACE RISKS AND THREATS TO CRITICAL INFORMATION INFRASTRUCTURE

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*Critical infrastructures are those physical and cyber-based systems essential to the minimal economy and government operations. They include, but are not limited to, telecommunications, energy, banking and finance, transportation, water systems and emergency services, both governmental and private. Many of the national critical infrastructures have historically been physically and logically separate systems that had little interdependence. As a result of progress in communication and information technology and the necessity of improved efficiency, however, these infrastructures have become increasingly automated and interlinked. The same progress has created new vulnerabilities to equipment failure, human error, weather and other natural causes, physical and cyber attacks. Addressing these vulnerabilities will necessarily require flexible, evolutionary approaches that span both the public and the private sectors, and protect both domestic and international security.*

**Keywords:** *cyberspace, critical information infrastructure, communication and information technology, cyber vulnerability, threat and risk, cyber security.*

**C**ritical infrastructures are systems and assets, whether physical or virtual, so vital to nations that their incapacity or destruction would have a debilitating impact on national security, national economic security, national public health or safety, or any combination of the aforementioned sectors. The critical infrastructure sectors are: agriculture and food, banking and finance, chemical, commercial facilities, communications, critical manufacturing, dams, defense industrial base, emergency services, energy, government facilities, information technology, national monuments and icons,

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