Establish a National Critical Infrastructure Resilience Center with Regional Hubs

BACKGROUND

A deficiency currently exists for U.S. critical infrastructure (CI) to quickly anticipate, aggregate, communicate, manage, and train for a timely and coordinated response to threats potentially impacting national CI assets. Many organizations, both federal and commercial, with CI operational and maintenance responsibilities have unproven and/or ineffective capabilities to successfully anticipate and respond in a timely and controlled manner to an unplanned, extended, or cascading disruption caused by cyber, physical, electronic, financial, or extreme weather threats. While these organizations can provide some level of response to protect their operations, their response is typically ineffectual, unpracticed, and myopic in serving a small portion of their total assets. In addition, organizations typically do not have a method for identifying, gathering, and analyzing real-time information allowing them to better prepare for potential disruption.

Thus, they cannot automatically notify appropriate personnel for early response activities, more effectively and efficiently manage a response directed to all assets (including those deemed to be nationally critical), and few can restore operations in a controlled and time-efficient manner. Addressing these vulnerabilities requires a coordinated national level vision towards developing an “early warning” monitoring and analysis approach that also provides coordinated real-time management, decision-making, and control capability encompassing enhanced Crisis Management (CM), Emergency Management (EM), Disaster Recovery (DR), Business Continuity (BC) activities at the regional level for a locally tailored response.

PROPOSAL

Create a National CI Resilience Laboratory that manages a network of regionally distributed CI Resilience Centers of Learning and Excellence (CIRCLE) in strategic locations around the nation to monitor local CI, plan regional training exercises, participate in national/regional modeling and simulation events, and coordinate ongoing education and workforce development programs. The CIRCLEs will assist governments (local, state, and federal), academic institutions, and appropriate private sector organizations to significantly enhance their real-time anticipation and response to disruptive scenarios that may impact CI assets.

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The CIRCLEs could gather metadata from local CI such as airports, military bases, hospitals, marine terminals, and approved/willing private industry for monitoring and analysis of threats to the cyber and physical systems that operate CI. The metadata and any associated alerts and alarms could be passed to the national level for national situational awareness and further analysis and/or action.

In addition to the real-time monitoring of regional CI, the CIRCLEs could provide the following:

1. Operational Resilience Centers (ORC's) to directly monitor, analyze, manage, and provide real-time response for increased CI protection and recovery when cybersecurity, physical security, natural, biological, or man-made events occur.
2. Consulting services to those entities seeking to enhance their capabilities in CI resilience, CM, EM, DR, and BC.
3. Research and development of improved resilience notification, coordination, communication, management, and decision-making capabilities.
4. Support CI administrators, management, and command staff in preemptive and concurrent Operational Resilience (OR) management and protocol activities rather than merely analyze response after an unintended interruption.
5. A comprehensive exercise protocol that portrays real-world factors to model, simulate, stress, and test existing operations centers on resilience and communications.
6. Training and education, including OR certification and workforce reskilling activities, for a field that has a shortage of trained resources.

PROPOSED FUNDING

The proposed national laboratory and regional CIRCLEs would support about 100- 150 personnel at the national level and 20-50 personal at each regional facility. The funding required would be approximately $50 million for the national facility and $10 million for each CIRCLE. The expectation is that the CIRCLEs would have an increasing amount of funding from regional partners, such that a "self-funding" approach would exist after five (5) years and become self-sustaining after ten (10) years. The national laboratory would require ongoing support based upon the level of involvement and participation with other national assets such as those supported at Mount Weather Emergency Operation Center.