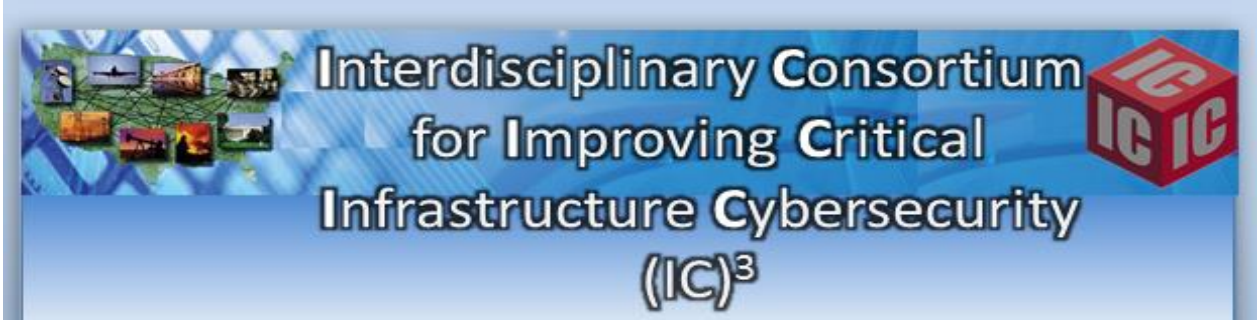


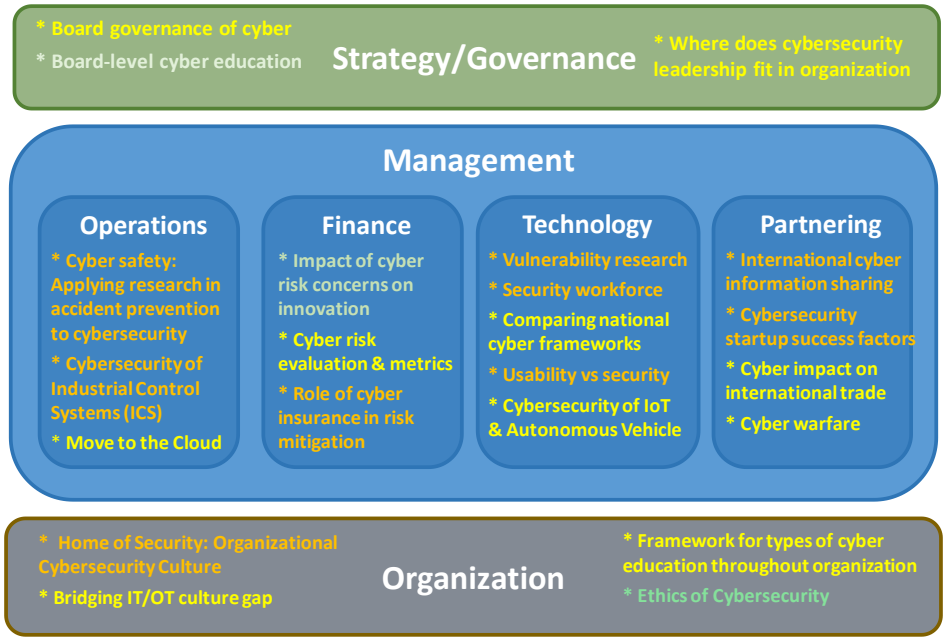

**SEC Commissioner Luis A. Aguilar …** ***warned that "boards that choose to ignore, or minimize the importance of cybersecurity oversight responsibility, do so at their own peril …"*** v17

## PROSPECTUS

PURPOSE: The Interdisciplinary Consortium for Improving Critical Infrastructure Cybersecurity, $(IC)^3$, is headquartered in the MIT Sloan School of Management. In collaboration with other parts of MIT, $(IC)^3$ intends to address the important need to improve the cybersecurity of critical infrastructure through an interdisciplinary approach **focused on the strategic, managerial, and operational issues related to cybersecurity**. $(IC)^3$ brings together thought leaders from industry and government with MIT faculty, staff, and students, working in multiple relevant areas. $(IC)^3$ conducts a variety of, meetings, workshops, conferences, and educational activities, and produces reports which can be used to improve critical infrastructure cybersecurity.

FOCUS: Based on initial feedback from prospective members, some important initial issues to be addressed are developing metrics and models that can be used by organizations to better protect themselves, and prevent cyber incidents, including: risk analysis, ROI calculations, process improvements, simulation of cybersecurity resilience, more effective information sharing, and increasing corporate (cultural) adoption and top-management commitment to cybersecurity efforts.

BROAD SCOPE OF MIT TEAM: The team participating in $(IC)^3$ activities are drawn from across MIT and include: Sloan School of Management (Information Technologies, Financial Engineering, International Trade), School of Engineering (Computer Science, Civil and Environmental Engineering, and Aeronautics and Astronautics), and School of Humanities and Social Sciences (Political Science.)





*Note: Most projects fit into multiple categories. Only the primary category is shown.*

*** Mature research (papers available)**
*** In-progress research (informal initial results)**
*** Start-up research**

Last updated: 2 Aug 2017

SOME SAMPLE PROJECTS (*continuously evolving based on sponsor recommendations*)

- **MIT House of Security:** $(IC)^3$ is extending prior work on measuring the Cybersecurity Culture in an organization, and methods for influencing security culture change.
- **Accident and Safety Studies**: $(IC)^3$ is extending its prior studies on safety and accident prevention to increasing cyber-safety and preventing cyber events.
- **System Dynamics and Tipping Point Analysis**: $(IC)^3$ is using System Dynamics to understand and measure what makes complex systems, such as cyber-infrastructures, unstable, and how to make them more resilient.
- **Simulation**: $(IC)^3$ is building on a rich history in simulation of complex systems under a wide variety of circumstances to develop better metrics and more resilient architectures.
- **Information Sharing**: $(IC)^3$ has studied and developed ways to improve and better coordinate CERTs that can be extended and applied to further improving information sharing nationally, internationally, and across critical infrastructure sectors.
- **Control Points**: $(IC)^3$ is studying the best "choke points" to interrupt cyber attackers.
- **Vulnerability Detection**: $(IC)^3$ has studied crowd source methods of bug detection, and is developing cost effective models to understand issues in black, white and grey markets.

MEMBER RELATIONSHIP AND BENEFITS: It is recognized that the strength of the relationship between MIT and the Member will depend on the efforts that both put into developing and maintaining the relationship. The $(IC)^3$ intends to become a unique opportunity for its Members, providing a window into relevant activities at MIT.

**Members** ($45,000 per year, or $35,000 per year if three year commitment)

- Listing in MIT (IC)3 publications and the MIT (IC)3 website as a Member of the MIT Interdisciplinary Consortium for Improving Critical Infrastructure Cybersecurity.
- Participation in meetings in which students, faculty, and staff present their early findings, as well as receiving copies of (IC)3 work in progress reports, and opportunity to provide feedback regarding the relationship to industrial and national needs.
- Possibility to participate in student projects, case studies, and field studies.
- Admittance to workshops and conferences organized by (IC)3 and receive other educational materials.

Partner Members ($120,000 per year), All of the above, plus

- Participation in special (IC)3 limited attendance round table discussions
- Ability to also attend meetings of the Cybersecurity@CSAIL initiative at MIT

Patron Members ($450,000 per year), All of the above, plus

- Participation on the (IC)3 Advisory Board
- Specified faculty contact, with monthly consultations

**For more information, please see http://ic3.mit.edu**
**or contact Stuart Madnick <smadnick@mit.edu>**
**or Keri Pearlson <kerip@mit.edu> or Michael Siegel <msiegel@mit.edu>**