



CHARGE  
to the  
FAST-TRACK ACTION COMMITTEE ON  
CYBER-PHYSICAL SYSTEMS RESILIENCE

SUBCOMMITTEE ON NETWORKING AND INFORMATION TECHNOLOGY  
RESEARCH AND DEVELOPMENT  
COMMITTEE ON SCIENCE AND TECHNOLOGY ENTERPRISE  
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

**Official Designation**

The Fast-Track Action Committee (FTAC) on Cyber-Physical Systems Resilience (CPSR) is hereby established by action of the Subcommittee on Networking and Information Technology Research and Development (NITRD) of the National Science and Technology Council (NSTC), Committee on Science and Technology Enterprise (CSTE).

**Definition**

For the purpose of this charge:

*Cyber-physical systems* are physical systems that rely on computing technologies for sensing, analysis, tracking, controls, connectivity, coordination, or communications. Most of the systems we depend upon across sectors, spanning our electricity, water, healthcare, communications, transportation, manufacturing, and defense, are now cyber-physical in nature.

*Cyber-physical resilience* is the capacity of an integrated system to keep running—even if not at peak performance—should it lose specific functions. Challenges include degradation or cessation of one or more aspects of the computational or physical functions due to component failures, human errors, natural disasters, or malicious attacks. For instance, if one or more of computer-based controls, sensors, or Internet communications employed in a water treatment plant fail, the system should continue to operate, by relying on backup systems and plans, auxiliary sensors, or manual controls.

As defined in the forthcoming National Resilience Plan, The United States defines resilience as follows: The ability to prepare for threats and hazards, adapt to changing conditions, and withstand and recover rapidly from adverse conditions and disruptions.

**Purpose and Tasks**

The purpose of the CPSR FTAC is to develop a National Plan for Cyber-Physical Resilience Research. The goal is to coordinate and focus research efforts within and across R&D agencies, academia, and industry that will increase the likelihood of successful research results, but more importantly help ensure that such results will transition into actual use.

- Review and assess the findings, conclusions, and recommendations made by the President’s Council of Advisors on Science and Technology (PCAST) in their February 2024 report, [\*Strategy for Cyber-Physical Resilience: Fortifying our Critical Infrastructure for a Digital World\*](#).

- *Recommendation 2B: Formulate a National Plan for Cyber-Physical Resilience Research. Partner across federal agencies to define priorities and support research in those areas. The goal is to create focused research across programs that increase the likelihood of successful research results, but more importantly help ensure that such results will transition into actual use.*
- Identify foundational R&D priorities, gaps, and opportunities in support of advancing the recommendations identified in the report
- Solicit input from relevant stakeholders, i.e., federal, academia, industry, and others to advance the FTAC's goals and objectives

### **Deliverables**

- Submit a final draft of the National Plan for Cyber-Physical Resilience Research to OSTP by late June 2025

### **Membership**

The following NSTC departments and agencies are represented on the FTAC on CPSR:

Department of Agriculture  
 Department of Commerce  
   National Institute of Standards and Technology (co-chair)  
 Department of Defense  
   Air Force  
   Army  
   Defense Advanced Research Projects Agency  
   Department of Homeland Security (co-chair)  
   Office of the Under Secretary of Defense  
   National Security Agency  
   Navy (National Research Laboratory)  
 Department of Energy  
   Office of Science  
 Department of Health and Human Services  
 Department of Transportation  
   Federal Highway Administration  
 National Aeronautics and Space Administration  
 National Science Foundation (co-chair)

The following organizations in the Executive Office of the President shall also be represented on the FTAC:

Office of Science and Technology Policy (co-chair) and The National Science and Technology Council's (NSTC) Subcommittee on Resilience Science and Technology (SRST) (co-chair)

The FTAC co-chairs and members may designate others from Executive organizations, Departments, and agencies including CSTE and members of the NITRD Subcommittee and/or others as the FTAC co-chairs may designate, as appropriate.

### **Leadership**

The CPSR FTAC co-chairs shall be federal representatives, named by the NITRD Subcommittee co-chairs.

**Resources**

The NITRD National Coordination Office shall provide project management along with executive secretary, information technology/networking, and administrative support services to the CPSR FTAC as part of its responsibilities to the NITRD Subcommittee.

**Termination Date**

Unless renewed by the NITRD Subcommittee, the CPSR FTAC will expire upon approval of the final Plan or 1-year from the approved date below.

**Approved:**

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Joydip Kundu  
Co-Chair, NITRD Subcommittee

August 27, 2024  
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Date

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Craig Schlenoff  
Co-Chair, NITRD Subcommittee

August 27, 2024  
\_\_\_\_\_  
Date