

National Infrastructure Advisory Council

July 11, 2006

The Honorable George W. Bush
President of the United States
The White House
1600 Pennsylvania Avenue, N.W.
Washington, DC 20528

Dear Mr. President:

We are pleased to submit the final report and recommendations of the National Infrastructure Advisory Council (NIAC) study on Workforce Preparation, Education And Research. The NIAC would like to credit and thank Mr. Alfred R. Berkeley, III, Chairman and CEO, Pipeline Financial Group, LLC, and Dr. Linwood H. Rose, President of James Madison University, for their leadership over the course of this study. The Council would also like to thank the members of the study group and external reviewers for their dedicated efforts.

Mr. President, at the July 13, 2004 meeting, you asked the NIAC to determine how the United States can ensure adequate development of intellectual capital to protect critical American information infrastructure and infrastructure concepts. As the marketplace grows increasingly technical, more and more of its operations rely on complex technologies and the highly-skilled engineers who make them run. The need for a technologically literate workforce is inescapable.

In order to compete in a globally competitive business environment, the nation's need for a technically proficient workforce is increasing. It is imperative the United States develops a workforce adept at math, science and engineering. This labor pool is integral to national security and drives the entire economy. Without adequate workforce preparation, national critical infrastructure and cyber security are at risk.

In light of our report's recommendations, the Council respectfully submits four key conclusions and policy recommendations for your consideration:

- **The Federal government should continue to support the education of our workforce via the Scholarship for Service Program (Cyber Corps).** Consistent funding and expanded, flexible hiring and internship practices enables the Cyber Corps program to supply a talented and capable workforce attending to the future's critical infrastructure and cyber security needs.
- **Designate a coordinating body to oversee cyber security research efforts.** This coordinating body would be responsible for prioritizing the government's cyber security research needs, allocating and tracking money spent on research and ensuring a balanced research portfolio. A thoughtful research agenda will add to the nation's talent pool by providing skills the nation needs.

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- **Designate a privately administered, public-private Information Assurance (IA) training certification body.** This organization would standardize IA position descriptions, including required and recommended Knowledge, Skills and Abilities (KSAs) for government jobs and review and reform IA testing procedures.
- **The Federal government should do everything in its power to assist states in implementing internationally competitive standards, curricula and teaching methods.** The United States has a heritage of comparing itself to itself. Discussions about education in the United States have traditionally involved internal comparisons: schools versus schools within school districts; school district versus school district; state versus state. This worked well when the United States' own economy essentially determined its standard of living. Globalization has removed that luxury. Global competition now sets the standards of performance for American workers and hence for the educational establishment that trains them. Asking our youth to spend twelve or thirteen years of their lives learning less than is needed to compete in a global market betrays them. America's curricula must be at least as rigorous as the curricula of our best performing global competitors and its teaching methods must be at least as effective as the teaching methods of our best performing global competitors. America must implement internationally competitive standards in education.

Mr. President, on behalf of my fellow NIAC members, we thank you for the opportunity to serve our country through participation in this Council.

Sincerely,



Erle A. Nye
Chairman Emeritus
TXU Corp.
Chairman, NIAC



John T. Chambers
President and CEO
Cisco Systems, Inc.
Vice Chairman, NIAC

cc:

Vice President Dick Cheney

Frances Fragos Townsend, Special Assistant to the President for Critical Infrastructure Protection; Homeland Security Advisor

The Honorable Michael Chertoff, Secretary of the Department of Homeland Security

Attachment: Final Report and Recommendations – Workforce Preparation, Education and Research– April 11, 2006