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MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference - Defense Science Board Task Force on 21st Century Industrial Base for National Defense

As the Department of Defense (DoD) enters its fourth major recapitalization and modernization since World War II, the defense industrial base is showing signs of age. The swift emergence of information-based technologies as decisive enablers of advanced military capabilities are largely developed and produced outside of the technologically isolated defense industrial base. The pace, scale, and industrial practices characteristic of information-based technologies threatens to overwhelm it and diminish the defense industrial base's capacity to meet national needs.

Half a century ago, the defense industrial base's prime contractors were built around a group of approximately three dozen large conglomerate firms with substantial capabilities in both advanced civil and military technologies and markets. This form of industrial organization facilitated the transfer of technologies between the civil and defense sector. Microprocessors, high-performance jet engines, space systems and technology, advanced materials, etc., developed in the defense sector 'trickled down' into the civil sector, while modern manufacturing technologies and support concepts sustained U.S. military power throughout the Cold War. The flow of militarily significant advanced technologies has been reversed from our Cold War experience. Technologies are now drawn from a global technology base outside of the defense industrial base and must 'trickle down' to the defense industrial base through an acquisition process that limits the defense industrial base's ability to exploit the process.

The successive narrowing of the scope of the major defense industrial base firms to a predominant defense focus (with a diminishing number of exceptions) left the defense industrial base as an isolated national defense 'island,' operating in a sea of thriving commercial information-driven firms operating on a global basis.

The defense industrial base is largely designed to develop, support, and evolve a vast legacy infrastructure of platforms, processes, infrastructure, networks, and personnel. Between 1992 and 2007, the number of prime contractors declined from 30 to 5, and except for Boeing (due to its dominant U.S. position in commercial aircraft development and production), the sales of the remainder were almost entirely to the Federal government, overwhelmingly the DoD.

The character of the evolving threat as well as the Science and Technology needs of the defense industrial base exposes U.S. security to significant risk in its present form. The homeland—and the defense industrial base—is no longer a sanctuary and must be protected from adversary kinetic and non-kinetic attack even as the homeland operates in a global defense-industrial environment.

Evolving the defense industrial base for both resilience and its capacity to meet future defense needs should be able to:

1. Respond to both surge and mobilization contingencies.
2. Adapt modernization practices to enable continuous improvement to anticipate adversary threat developments.
3. Integrate supply chain development into product design.
4. Mitigate vulnerability to adversary cyber operations.
5. Leverage Title 10 authorities related to the “national technology and industrial base” that includes “persons and organizations in the [United Kingdom], Australia, and Canada.”
6. Strengthen the capacity of the industrial base to adapt to routine government off-the-shelf/commercial off-the-shelf products as well as highly specialized defense-related product procurement through the Defense Production Act and related authorities.

This study will focus on the proactive steps needed to increase the depth, breadth, and security of our defense industrial base.

Task Force members are granted access to those DoD officials and data necessary for the appropriate conduct of their study. I will serve as the DoD decision-maker for the matter under consideration and will coordinate decision-making as appropriate with other stakeholders identified by the study’s findings and recommendations. The nominal start date of the study period will be within three months of signing this Terms of Reference, and the study period will be between 9-12 months. The final report will be completed within six months from the end of the study period. Extensions for unforeseen circumstances will be handled accordingly.

The study will operate in accordance with the provisions of Public Law 92-463, “Federal Advisory Committee Act,” and DoD Instruction 5105.04, “DoD Federal Advisory Committee Management Program.” It is not anticipated that this study will need to go into any “particular matters” within the meaning of title 18, U.S. Code, section 208, nor will it cause any members to be placed in the position of action as a procurement official.

I will sponsor the study. Dr. William Schneider and Mr. David Van Buren will serve as the co-chairmen of this study. Ms. Jennifer Santos will serve as the executive secretary. Mr. Dan Wilmoth will serve as the Defense Science Board Secretariat.

Michael D. Griffin

A handwritten signature in blue ink, appearing to read 'M. D. Griffin', followed by a long horizontal line extending to the right.