

Preliminary Observations & Key Considerations for the National Defense Science and Technology Strategy

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National Defense Science & Technology (S&T) Strategy Review Task Force

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Understanding the importance of U.S. economic and technological advantage, and implications for U.S. national security, Congress tasked the Department of Defense with a first-ever National Defense Science & Technology Strategy (NDSTS), to establish Department S&T priorities, posture the S&T enterprise for strategic competition, and focus on outcomes for the warfighter. The NDSTS should provide the Department a roadmap for how to prioritize efforts and investments across the development, adoption, and use of technologies that are key to the warfighter and ultimately our nation's future. The NDSTS should also provide an opportunity to focus the Department's domestic and international partners – in the private sector and beyond – on the innovation challenges ahead. Much is at stake with this S&T strategy. The United States is not guaranteed success or even parity within the global security landscape. The development, adoption, and use of technology are key in determining our nation's future in an era of intense competition.

The Defense Innovation Board NDSTS Review Task Force was directed by the Secretary of Defense to assess the "adequacy" of the NDSTS to fulfill the congressional requirement and National Defense Strategy priorities. This working draft lays out initial observations and principles the Task Force believes the Department should consider in development of this strategy.

The Task Force will continue its research following the strategy's release and present advice and recommendations to the Defense Innovation Board in the summer.

The Task Force welcomes public comments on this study: osd.innovation@mail.mil

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The Task Force's preliminary observations are as follows:

1. **FOCUS:** It is imperative that DoD have a coherent, integrated S&T strategy. Developing and fielding technology at appropriate speed is essential to America's national security.
2. **URGENCY:** While there is much agreement inside and outside of government on the nature of the problems, there is not sufficient urgency to make the needed changes within DoD, in other Executive Branch agencies, or in the Legislative Branch.
3. **CULTURE & INCENTIVES:** DoD's challenges are not primarily with its technologies but with people and process. There are not the proper incentives and thus the necessary culture for those working within DoD to take appropriate risks and to move at needed speed for innovation.
4. **OUTCOMES:** Too much focus is placed on inputs rather than outcomes. Despite well-intentioned goals and policies that often say the right things, insufficient and delayed outcomes in equipping warfighters with the best technology the nation can produce signal that a significant process or cultural shift is needed.
5. **ATTRACTING THE INNOVATION ECOSYSTEM:** National security technologies are drawn from an increasingly diverse and dispersed base, with many resources located outside of DoD (i.e., in other government agencies, industry, academia, and among trusted international allies and partners). Unfortunately, interacting with DoD remains challenging, deterring many from engaging.
6. **TRANSITION:** It is far too difficult to get needed capability from researchers and developers into the hands of the warfighter, and that transition does not happen quickly enough. Unless swift changes are made – including support for adoption of existing commercial technologies – we will continue to languish.
7. **TALENT:** DoD lacks a human capital strategy for focusing the nation's best and brightest on the full spectrum of emerging science, technology, and innovation-related national security issues, and for bringing this talent into the Department.
8. **BUDGETS & ACCOUNTABILITY:** There is not an alignment of overall responsibility for the S&T enterprise with budget resources, neither is there sufficient accountability for how S&T dollars are spent and for results.
9. **LETHALITY:** Ensuring warfighter lethality should be a foundational principle for the strategy. DoD's efforts to build and invest in leap-ahead technologies are core to its broader mission to prepare our warfighters for any future fight.
10. **IMPLEMENTATION:** Simply producing another strategy document will not make a significant difference unless it is implemented and enforced throughout DoD. Effective implementation of a strategy will require commitment and continued involvement from Department leadership.