

# The Future of the Space Industrial Base

**A Discussion Featuring**  
**Brett Lambert, U.S. Department of Defense**  
**Hal Hagemeyer, U.S. Department of Defense**  
**Vincent Dennis, Deloitte Consulting**  
**William Adkins, Adkins Strategies**

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On Tuesday, May 25, 2010, the George C. Marshall Institute hosted a Washington Roundtable on Science and Public Policy considering “The Future of the Space Industrial Base.”

A video of the event is available at <http://www.marshall.org/video/100525-spacebase.php>.

Introduced by Institute President Jeff Kueter and moderated by Institute Fellow Eric Sterner, this event examined the overall health of the industrial base which underpins American civil and military space, and its ability to meet the needs of U.S. national security and space exploration goals and missions. Speakers discussed concerns such as maintenance of workforce size and quality, the uncertain reliability of suppliers in an era of dwindling orders, and rising costs as the industrial base shrinks and the market becomes less competitive. Government spending increasingly is directed towards maintaining older systems, leaving fewer resources to invest in future systems. To address these problems and the procurement policies that contribute to them, the government is supporting a number of industrial base reviews, which will recommend corrective actions. The speakers addressed the current state of those reviews and the issues generally.

The keynote speaker was Brett B. Lambert, Director of Industrial Policy at the Department of Defense. Mr. Lambert emphasized the unique challenges of the space environment and current budgetary constraints, which require a more nuanced acquisition process than terrestrial systems. To chart a path forward, he outlined “Seven Pillars of Industrial Policy” that the DOD plans to pursue. These pillars

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include a healthy dose of realism: the defense budget will not grow by double digits, and the government, military services, and industry need to learn how best to fulfill missions with available funding. Space assets will grow in importance, supporting ongoing military operations, expanded information sharing with allies, and coalition partnerships. Mr. Lambert acknowledged that bad policies and risk-averse mindsets within the Pentagon have resulted in poor decisions. The DOD is seeking to improve its relationships with industry, which have deteriorated over the last decade. By enhancing stability, transparency and trust, the DOD can become a more reliable partner for industry while improving the Department's own understanding of industry's needs, Mr. Lambert told the audience.

Mr. Lambert indicated the Obama Administration's desire for increased exports in all areas, space technology included, and export reform is high on the agenda. He expressed hope for policy changes in the near future, but acknowledged the challenges. One challenge mentioned was overcoming the inertia of set processes – individuals, companies, and government have grown accustomed to operating and interacting in a specific way. Changing those relationships will take time, focus, and leadership. Mr. Lambert predicted step-by-step change. He said: "I think we are coming to terms rather quickly with a design, a framework that will allow us over time to transition to a much more effective export-promotion strategy as opposed to an export-control strategy."

The United States has always been a leader in space, but other countries in Europe and Asia have developed their own space industry to the point where they are now challenging America's position as the dominant actor in space. The U.S. has unwittingly aided in this development by refusing other nations access to our technology, due to restrictive export laws. Restrictive export controls, such as the International Traffic in Arms Regulations (ITAR), are starving the U.S. companies which supply communications satellites and allied technology, because they are not permitted to export and compete in the world-wide market.

Mr. Lambert also discussed challenges facing the defense supply chain. He noted the growing dependency of government programs on a global supply chain, and suggested that understanding of the second- and third-tier suppliers was lacking. The primary contractors have good insight into their own supply chains and he concluded that government will need to work with them to avoid making decisions based on lack of knowledge. Mr. Lambert stated: "We will do whatever is necessary, as a Department, to protect our strategic systems and the industrial base that provides to those systems." According to Lambert, the administration is particularly concerned with preserving necessary skill sets. Design teams are critical national assets, even without programs of records. Mr. Lambert also stressed the need to engage design teams, not just fund them, to keep them active and productive.

Following Mr. Lambert's remarks, a panel discussed issues raised by his remarks. The first panelist was Mr. Hal Hagemeyer of the Department of Defense's National Security

Space Office. DOD established a Space Industrial Base Council to look at these issues, chaired by the director of the National Reconnaissance Office and senior officials in the Air Force. The Council was designed to see that industry would be available when the Defense Department needed it. The Department established a Critical Technology Working Group to explore supply chains and examine critical technologies. The Space Suppliers Council was also established to focus on the concerns of second and lower-tier suppliers, which are typically filtered through the primary contractors, and to promote more dialogue between the Defense Department and these suppliers. This has helped develop trust and a good working relationship, enabling government to address some of the problems of smaller companies.

Mr. Vincent Dennis, a Principal at Deloitte Consulting, discussed the erosion of the U.S. supplier base and the implication of foreign investment in the U.S. aerospace defense industry. He argued that the U.S. has lacked mechanisms to assess and communicate: 1) deficits in the industrial base, especially among the lower-tier suppliers and raw materials; and, 2) the price increases resulting from increased competition for certain elements and materials. Supply chain challenges are evident in space asset acquisition, and Mr. Dennis argued for a forward-looking perspective toward 21<sup>st</sup> century defenses. The existing acquisition offices are ill prepared to deal with globalized threats and competition. An accelerating contraction among lower-tier contractors and economic challenges for mid-tier ones is predicted, he said. China's monopolization of necessary rare earths is a particular concern. The existing controls to monitor and check foreign investment in the space industrial base, particularly among lower tier firms, are weak at present. While such investment is not inherently bad, it does need to be monitored. Mr. Dennis also noted a number of risks in technical areas and in post-transaction monitoring. Mr. Lambert's office is studying these risks, but they require continuous attention.

The last speaker was Mr. William Adkins, President of Adkins Strategies. The industrial base constitutes more than just the prime contractors, he said; it includes the lowest tier suppliers and all are interdependent. Problems for one affect them all, but so do improvements and successes. He pointed out that the space industry is in trouble, in spite of all the attention and money devoted to it, in part because it is a victim of its own past success. Satellites on orbit have proven to last longer than expected and remain highly capable. This condition has suppressed demand for new systems and launches and undermines incentives to invest in research and development. For the industrial base, that results in fewer orders and unstable programs. The industry needs stability and predictability from the government in order to attract the best workers and allocate investment. A new generation of smaller satellites with more sophisticated technology has the potential to change the acquisition process and impact supply base by reducing costs of development and access to space.