



2017 AIAA Key Issues: Aerospace & Defense Budget Funding and Procurement

Issue Area: Funding Instability

The A&D industry is facing one of its greatest challenges in history as Congress and the administration deal with mounting national debt and balancing the federal budget. All federal agencies face significant budget reductions, with the DOD potentially bearing the biggest burden. At the same time, our adversaries are investing heavily in military modernization, while the United States confronts significant strategic risks due to continuing budgetary uncertainty and the potential return in Fiscal Year 2018 of the arbitrary budget caps of the sequestration process. While all areas must be examined to identify unnecessary spending that can be reduced or eliminated, we must ensure that the nation's future is not compromised by a lack of action today.

Moreover, the usage of continuing resolutions, passage of omnibus appropriations packages, and threat of government shutdowns have become commonplace. The last year all twelve appropriations were passed by Congress prior to the start of the new fiscal year was in 1996. A return to a regular appropriations process is needed immediately so that the nation, including the A&D industrial base, can begin work on initiatives critical to a robust and secure future.

- Constant funding via continuing resolutions impedes new research, the development of new products, the start of new programs and missions, and the ability to make required scope changes in a timely manner.
- An irregular and uncertain budget process impacts long-term planning, work prioritization, staff hiring and development, and getting products to their users in a timely manner.
- Funding disruptions increase cost, decrease quality, stretch schedules, hamper competition, impact the warfighter, and decrease commercial competitiveness.

Recommendation: Return to regular order, permanently eliminate sequestration, and provide adequate operational funding to support current military operations.

Issue Area: Take Longer-Term Perspectives

A vigorous and robust U.S. aerospace industry requires support that is agile enough to address changing technologies and a stable stream of funding across multiple fiscal years. The current unpredictable budgetary environment creates short-term perspectives where aerospace initiatives are delayed and under constant threat of scope reductions or termination.

Foundational and applied research can take many years to be included in the design of a new aerospace product. The infrastructure required to support this research and the development of new products is costly. The infrastructure required to produce aerospace products is complex and expensive and is often developed in conjunction with the product. A long-term perspective is essential to the health of the A&D industry and for all the benefits it provides to the nation.

Recommendations:

1. Provide DOD with stable and predictable funding that allows industry to meet the needs of national security current and future missions.
2. Provide long-term authorization and appropriations with top-line increases in the out years to properly fund NASA missions in a balanced manner in order to meet short- and long-term program and mission requirements. This will help maintain our nation's leadership in space exploration and scientific discovery, while also helping to make critical advances in technology development and aeronautics research.
3. Provide long-term authorization and appropriations with top-line increases in the out years to properly fund the FAA in order to successfully implement the Next Generation Air Transportation System, commercial space transportation operations, safely integrate unmanned aerial vehicles into the National Airspace System, and complete other priority FAA modernization initiatives.

Issue Area: Invest in Research and Development

According to the Aerospace Industries Association, U.S. government research and development (R&D) spending as a percentage of Gross Domestic Product (GDP) has fallen by 60 percent since 1964. The American Association for the Advancement of Science cites an even greater decline in federal spending as a percentage of GDP for R&D facilities of over 70 percent since 1976, which has limited the physical capabilities used to accomplish this work. Over this same time frame, and especially since the end of the Cold War, A&D industry consolidation has further reduced R&D investment. China's R&D investment, however, is the fastest growing of all advanced countries. The A&D product pipeline is being impacted by reduced R&D investment, causing our nation to fall behind our foreign competitors and placing our physical and economic security at risk.

Aeronautics research, in particular, has declined significantly over the last two decades to \$640 million in fiscal year 2016. By comparison, fiscal year 2004 funding was \$1.3 billion in constant dollars. Investments in aeronautics have improved aviation safety dramatically, made air travel affordable for most Americans, and significantly diminished the environmental impact of aviation through reduced community noise and emissions. Adequate funding and a long-term commitment to aeronautics R&D is essential if the United States is to continue developing revolutionary capabilities for the nation's future aviation systems that will transform and reinvigorate the A&D industry.

Recommendations:

1. Invest in experimental (ground and flight testing) and computational infrastructure for military and commercial R&D. This provides improved quality and reduced system development costs and timelines by providing the right tools for qualified staff to identify and remove defects early in the development process.
2. Promote greater interaction and cooperative arrangements between federal labs and research centers, industry, and academia. Tight budgets tend to drive parochial decisions while a systems view will drive idea sharing, enhanced utilization of capabilities, improved quality from using the right tools, and optimization and cost control at the system (national) level.
3. Consider legislation that increases tax incentives for corporate research.
4. Increase DOD's R&D budget to ensure the United States' qualitative technical superiority and long-term technical leadership.
5. Support robust, long-term federal civil aeronautics research and technology initiatives funded at a level that will ensure U.S. leadership in aeronautics.