

Big Data Investments are Accelerating across the DoD

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Related Categories: Department of Defense, IT Budget, Federal, Air Force, Big Data/Analytics, Army, Emerging Technologies, Navy

In a recent [blog posting](#) that received [wide industry attention](#), I detailed how the Defense Advanced Research Projects Agency (DARPA) is investing big money in research and development efforts related to big data. An observation discussed in that post concerned the fact that advanced analytics and technologies like distributed computing are becoming entwined with modern, networked weapons systems. The incorporation of big data is a function not only of the growing complexity of weapons, but also of the command and control capabilities that today's U.S. military is employing. Facing a falling number of military personnel, all branches of the Defense establishment are turning to networked and unmanned weapons commanded and controlled from a distance to offset the strain on American fighting power.

In this context, DARPA's R&D efforts are the "tip of the spear" when it comes to figuring out how big data technology can enhance combat capabilities. DARPA is not the only Defense organization, however, that is dedicating R&D dollars in this area. The military services are also investing and in general the funding flowing into those research efforts is growing annually.

Defense R&D Programs with Big Data Technology as Primary Objective

Agency	FY 2014 (Act.)	FY 2015 (Est.)	FY 2016 (Req.)
Navy	\$50.6M	\$55.1M	\$65.7M
Air Force	\$51.7M	\$51M	\$47.9M
Army	\$28.4M	\$28M	\$45.5M
Totals	\$130.7M	\$134.1M	\$159.1M

Source: FY 2016 DoD RDT&E Budget Request

As the numbers in the chart above demonstrate, all of the military services are funding R&D efforts related to big data. The data in the table above reflects projects in the FY 2016 Defense Research, Development, Test, and Enhancement (RDT&E) budget request that are dedicated primarily to some type of big data R&D. Put otherwise, developing a big data-related capability is the primary objective of the effort. In addition to these primary efforts, there is a plethora of other research programs that include big data technologies as part of the effort. The FY 2016 requested funding numbers for those programs with a related big data component are shown below.

Defense R&D Programs with Big Data Technology as Related Objective

Agency	FY 2014 (Act.)	FY 2015 (Est.)	FY 2016 (Req.)
Navy	\$461.1M	\$467.1M	\$485.4M
Air Force	\$162.1M	\$160.6M	\$183.1M
Army	\$39M	\$41.3M	\$56.1M
Totals	\$662.3M	\$669.1M	\$724.7M

Source: FY 2016 DoD RDT&E Budget Request

What to make of these figures?

First, when the primary objective of a project (Table 1) is developing a big data solution, the Navy is leading the way among the military services. A big reason for this is the Navy's push to employ unmanned systems – aerial, surface, and undersea – on a much greater scale than at present. The development of these systems requires an incredible amount of money, with work focused on enhanced C2 capabilities, cyber security, and analytics for parsing intel data gathered by these systems. This trend is in evidence in the Air Force and Army as well, just not to the extent it is in the Navy, so if your company works in this area, it is a green field.

Second, from FY 2015 to FY 2016, the Army intends to nearly double its investment in primary big data related R&D (Table 1), reflecting a focus on parsing intel data and on utilizing big data for cyber security operations, especially automated network monitoring and defensive response.

Third, the Air Force is the only service that will see investment in primary big data R&D fall in FY 2016. This is due to some slight cuts in multi-source fusion technologies research and in the evaluation of advanced countermeasure concepts. When it comes to big data R&D related to other efforts (Table 2), the total planned investment grows significantly, with a special focus on the automation of complex networks, analysis and use of sensor fusion technology, and exploitation of intel data.

In conclusion, looking at this one piece of the DoD big data market we can see that the military services intend to spend at least \$159 million in FY 2016 on R&D related primarily to a big data objective. At most, they intend to spend almost \$725 million, if we count programs with a related big data component. Keep in mind that these numbers do not include present investments in operations and maintenance and procurement programs. Big data R&D is thus a growing area of Defense IT spending in an otherwise flat market.