

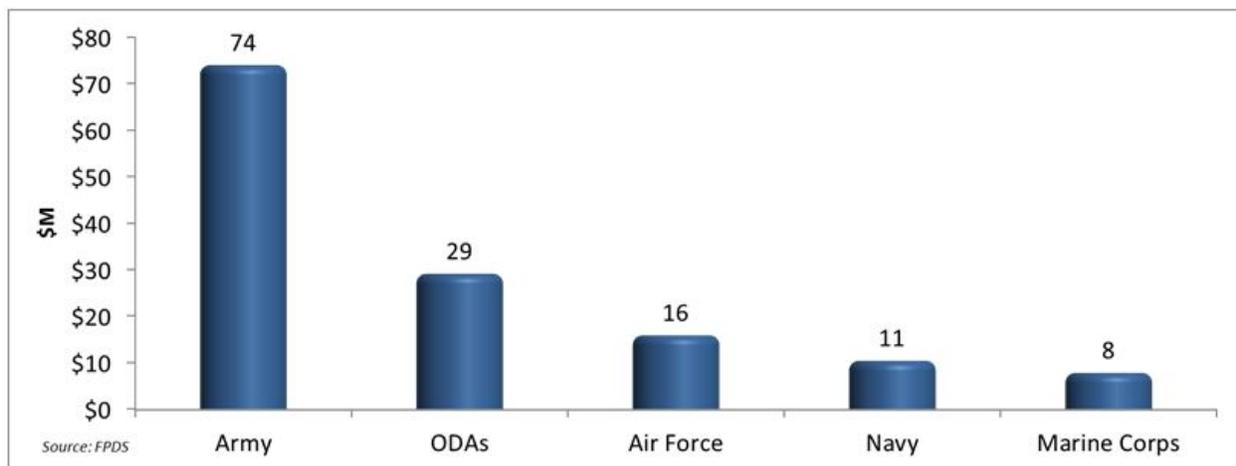
Predictive Analytics Use at the Department of Defense

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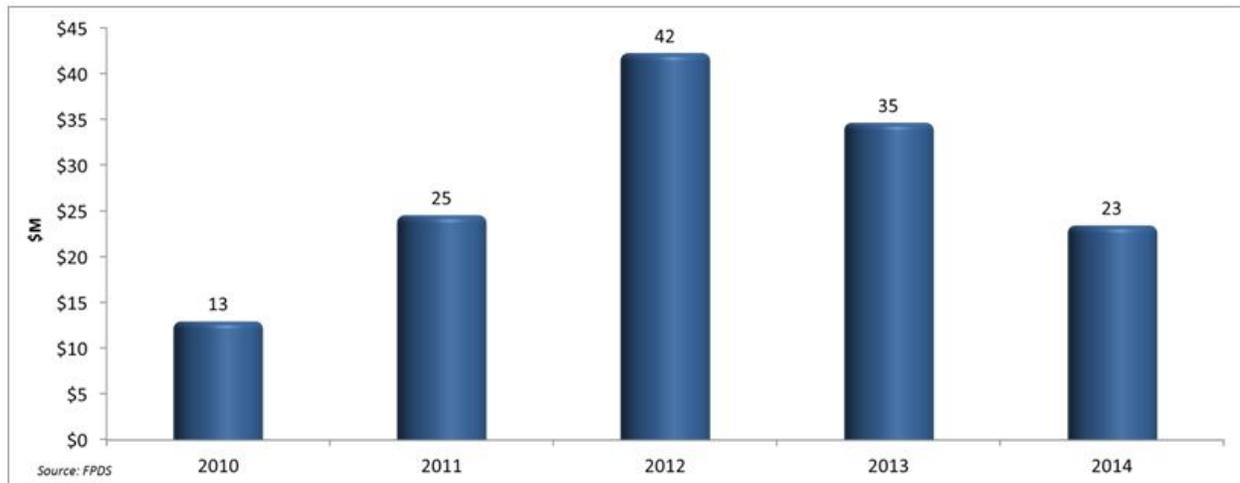
Back in September, an organization at the National Defense University called the Center for Technology and National Security Policy published a research paper entitled [Policy Challenges of Accelerating Technological Change: Security Policy and Strategy Implications of Parallel Scientific Revolutions](#). Looking past the long title, one finds an in-depth consideration of the implications of emerging technologies for U.S. national security and the DoD. Considering the CTNSP is part of the defense establishment, I believe it is worth taking a few minutes to examine what the authors say, particularly since their comments fit seamlessly with the recently announced Defense Innovation Initiative (DII). Papers like this can point to areas of investment and in a time of falling budgets, any insight is welcome.

The report discusses more subjects than I can cover here, so in today's post I'll zero in on its comments about big data analytics. Use of big data analytics in the DoD is nothing new. In fact, based on recent contract spending data (see chart below), we can see that defense customers spent nearly \$138 million on big data analytics over the five years from fiscal 2010 to fiscal 2014.



Big data analytics in this context are defined as advanced analytics programs offering visualization and modeling capabilities that enable statistics-based prediction/forecasting. Think Mathematica, MATLAB, Splunk, Statistica, Tableau, etc. and you have an idea of the programs included in this data.

According to the CTNSP report, employing these kinds of analytics on a vastly greater scale will be the key to controlling and exploiting the data that defense organizations will be gathering from the expansion of unmanned systems, robotics, and the Internet Protocol-enabled "Internet of Things." The uses for such analytics include the analysis of intelligence data, cyber security, and the transition to a "health maintenance-based, rather than a disease-based medical model," that will enhance the operational readiness of U.S. military personnel. The report's recommendations have a clear implication – that the DoD should greatly ramp up its spending on predictive analytics and the training of its personnel to use them. In recent years, however, just the opposite has been taking place. Examining the data presented above from the perspective of spending per fiscal year (see chart below), we see that defense spending on PA peaked at \$42 million in FY 2012 and has declined since.



Undoubtedly the recent pressure placed on DoD's budget by sequestration is the primary reason for reduced spending on PA. The question is will this trend continue. My guess would be no, for the simple reason that the DoD cannot afford to neglect developing its PA capabilities. To do so at a time when more data is coming at defense analysts than ever before would be folly. Add the increasing use of automated systems to the mix and the answer is obvious – the DoD must spend more on PA. Currently the department is in a period of retrenchment as it struggles with new budget realities. Once this retrenchment has run its course, defense customers are likely to turn their attention back to acquiring PA capabilities. The DII points the way forward in this respect and for industry partners it's a welcome signpost of spending ahead.