Army Investment in Unmanned Systems Benefits IT Vendors

Posted At : April 28, 2015 8:20 AM | Posted By : Alex Rossino

Related Categories: Department of Defense, IT Budget, Federal, Army, Emerging Technologies, Unmanned Systems

The U.S. Army today faces significant budgetary and technological challenges. The fiscal limitations alone cannot be underestimated. With the Army's annual budget falling the last several years, military leaders have been forced to cut both programs and personnel. Current projections show that by FY 2019 the number of active Army personnel will slide to 420,000 troops, down 14.3% from the current level of 490,000. Rapid technological change is also altering the circumstances under which Army personnel operate, as potential adversaries with advanced technical capabilities, particularly in the area of electronic warfare, challenge U.S. military supremacy.

In response to these challenges, the Army is turning to ever more advanced platforms for intelligence gathering and electronic warfare, particularly platforms that are unmanned and/or robotic. These platforms are unlike previous generations of technology in that they continuously generate vast amounts of data. This data requires analysis, which is a potential boon to vendors that offer advanced analytic capabilities. There are, however, other areas related to unmanned systems where information technology vendors can find business opportunity. These include modeling and simulation, algorithm design, software development, autonomy/artificial intelligence, testing, machine learning, cyber security, and electronic warfare-cyber convergence.

The Army's investment in unmanned systems is symptomatic of the fundamental transformation of modern warfare into a seamlessly intertwined network of weapons systems, surveillance platforms, and IT capabilities. It therefore behooves those of us tracking federal IT to keep an eye on unmanned systems spending for the business opportunities it presents.

The table below shows programs directly related to the development and fielding of unmanned systems, as listed in the Army's Research, Development, Test, and Evaluation budget request for FY 2016.

Program	FY 2014 ($M)	FY 2015 ($M)	FY 2016 ($M)
Tank-Automotive Research, Development and Engineering Center	1.157	1.496	1.452
Reliable Small Engines for Unmanned Systems	1.712	1.70	1.73
Rotary Wing Aerodynamics	2.493	2.302	2.328
Robotics Autonomy and Human Robotic Interface Research	1.924	1.996	1.983
Intelligent Systems	0.00	5.00	5.25
Autonomous Systems	6.425	5.841	5.557
Robotics CTA	4.654	3.573	3.79
Perception and Intelligent Control	5.723	4.365	4.636
National Rotorcraft Technology Center	3.014	5.055	4.704
Rotors & Vehicle Management Technologies	8.704	8.774	9.431
Unmanned and Optionally Manned Technologies	5.221	6.489	6.603
Micro/Small Scale Unmanned Aerial Systems	0.59	1.51	1.762
Imaging Laser Radar (Ladar) and Vision Protection	2.715	2.722	2.659
Human-Robot Interaction (HRI)	4.53	4.24	3.164
Unmanned and Optionally Manned Systems	7.045	8.00	8.444
Non-Primary Power Systems	3.356	2.646	3.096
Unmanned Ground Systems Technology	8.3	7.066	7.554
Airborne Unmanned Persistent Imaging	4.73	0.00	0.00
Small Unmanned Ground Vehicle	0.00	2.769	40.374
NGATS Electro-Optics Subsystem	1.00	0.50	0.20
Engineering and Manufacturing Development for the Unmanned Aerial System - Target	0.574	0.452	0.585
Robotics	2.165	1.00	0.00
Manned Unmanned Teaming Ground	0.00	0.00	0.203
UAV Engine	0.22	0.25	0.20
Advanced Payload Develop & Support	5.55	5.27	3.589
Tactical Signals Intelligence Payload Development	24.68	12.90	7.14
Joint Technology Center System Integration	3.28	4.70	2.498
MQ-1 Gray Eagle - Army UAV	13.07	46.47	0.00
RQ-11 Raven	5.984	0.00	0.00
RQ-7 Shadow UAV	12.03	16.39	7.297
RQ-7 UAV MODS	121.90	125.38	81.44
Total	**262.752**	**288.857**	**217.671**

Source: Army FY 2016 RDT&E Budget Request

Generally speaking, this part of the Army's budget request includes dollars that will be spent on research and development efforts. It is often considered to be "new" money the Army is asking for, unlike the funding it requests for Operations and Maintenance, Military Construction, etc. As we can see, the Army invests a lot on unmanned systems. This RDT&E spending amounted to nearly $263 million in FY 2014 alone. In FY 2015, the Army anticipates spending almost $289 million. In FY 2016, however, investment drops-off to roughly $218 million. There is no data to explain this decline, but my assumption is that planners have factored in the threat of sequestration.

It is worth noting that the development effort surrounding every one of these systems has one or more IT components related to it. These components include systems design, software engineering, and testing, among a myriad of other activities. The work is generally centered at the Army Research Laboratory, although considerable effort also takes place at the Communications-Electronics Research, Development and Engineering Center (CERDEC). Finally, the programs listed above are those which deal directly with unmanned systems. There is also work related to unmanned systems in programs where unmanned systems are but one part of a larger effort. For these programs, the Army has requested $285 million in FY 2016, making the pot that much sweeter in the coming fiscal year.