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■ **WRG Aerospace & Defense**

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Competition Catalysts: T-X Field Tightens Ahead of March Bid Due Date

The Cowen Insight

We've updated our list of DoD competition catalysts for 2017. Heading into the year, we see a slate of Air Force programs presenting the biggest opportunities for defense companies. The competitive field is narrowing for the \$16B T-X trainer program, with one major team bailing out and another on the fence. We think the program's fixed-price contracting structure may be giving some bidders pause.

T-X Trainer, JSTARS Recap, GBSD Offer Big Opportunities in Late 2017

We expect a number of big competitive decisions in the later half of 2017 and most of them are Air Force programs. Our catalyst tracker is included in this note, and we take a look at three of the USAF's high-value competitions that are underway (T-X, JSTARS Recap, and Ground Based Strategic Deterrent).

T-X Advanced Pilot Training. Significant news last week on this program with the Raytheon-Leonardo team dropping out of the running, and Northrop Grumman CEO Wes Bush saying his company was still deciding whether or not it would bid on the 350-aircraft, \$16B program. If Northrop (partnered with BAE Systems and L-3) does not bid, there would be a field of three remaining: Boeing and Saab with a clean-sheet design; Lockheed Martin and Korea Aerospace Industries with the T-50A; and Sierra Nevada and Turkish Aerospace Industries with its own clean-sheet design. We would not expect Textron to offer its Scorpion jet unless there was a reduction in the Air Force's current T-X performance requirements. We reviewed the USAF's request for proposals and noticed that all of the program elements would be done under fixed-price elements (some incentive fee and some firm fixed). To us, this would be a disadvantage to bidders who offer clean-sheet designs, which Boeing, Northrop Grumman and Sierra Nevada have said they intend to do. New aircraft would include a design cost (or the bidders would have to pay for it themselves) and the production cost would be estimated and not based on actual experience (leading to some risk on the fixed-price production cost). Also there is a \$16.3B cap on the proposal, meaning bids above that amount will not be evaluated. The program covers more than just jets, and includes training and mission planning platforms that will make up the Advanced Pilot Training family of systems. The initial award will cover development and production of the first five aircraft, plus mission planning systems, ground support gear, and initial spares. Proposals are due March 30 so a decision to bid or not should be made within the next several weeks. Interestingly, if the USAF does decide to pursue a non-developmental light-attack aircraft (a recent development which may or may not pan out into a real program), we would be curious to see if the USAF decided to use the winning T-X jet for that mission.

JSTARS Recapitalization. We see two interesting elements to this competition. The first is whether the aircraft and radar are separate decisions. Boeing, Northrop Grumman and Lockheed Martin are proposing aircraft, while Northrop Grumman and Raytheon are developing the aircraft's mission radar. We are interested to know whether the Air Force has option to select different combination aircraft and radar.

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The USAF's request for proposals for this 17-aircraft, \$7B program is not available for review. The second element is whether or not the USAF has shown a preference for business jets by selecting the General Dynamics' Gulfstream G550 for the EC-130H Compass Call recapitalization program. The USAF wants to buy up to 10 G550s for the role but has been limited by Congress to purchasing only two until it can demonstrate the aircraft can perform the mission. Both Northrop (teamed with GD) and Lockheed Martin (teamed with Bombardier) are offering business jets. The RFP includes the full system, including the aircraft, radar, communication systems and battle management command and control suite. The USAF wants three engineering and manufacturing development (EMD) aircraft, and there will be contract options for low-rate initial production for two more aircraft, plus full-rate production of three lots of four aircraft each.

Ground Based Strategic Deterrent. Two of the current three bidders (Boeing, Lockheed Martin or Northrop Grumman) will be selected by the Air Force to move into a three-year technology development stage. We believe both Orbital ATK and Aerojet Rocketdyne are working on propulsion concepts and are not exclusively matched with either of the three primes at this point. We could see this program being modified or down-scoped if the Air Force does not receive additional top-line funding to buy all of the programs it wants over the next decade. We could see this program becoming a Minuteman III upgrade rather than a brand new missile. GBSD would build ~640 new nuclear-tipped intercontinental ballistic missiles to replace the current 450-missile Minuteman III force. Boeing, Northrop Grumman and Lockheed Martin have submitted proposals. The Air Force plans to award up to two 36-month cost-plus, fixed-fee technology maturation and risk-reduction (TMRR) contracts by the end of FY17 (we think an earlier summer target will likely slip to the fall). Based on the Air Force's FY17 budget request, spending this year will be relatively small, estimated to be about \$27.5M per winner in FY17. But spending will ramp up in FY18 and FY19, and crack \$1B annually in FY20 and FY21. A winner will be selected from the two TMRR concepts in FY20. Cost estimates for the total program have been a sticking point between the Air Force and Office of the Secretary of Defense. The USAF estimated a \$62.3B total program cost, while OSD estimated \$85B.

Additional Comments About Table 1

Please click on the report link to view the table. We have compiled the list of programs based on DoD budget material, acquisition plans, press reports, open-source requests to industry and congressional reports. The dates, dollars figures and program scope estimates represent our collective analysis of those sources. We have identified potential bidders for each program based on company disclosures and/or already awarded contracts. The list is focused on hardware/system development and procurement contracts that will be decided using full-and-open or limited competitions. We have not included government support services contracts in this version but intend to do so in the future.

Program	Buyer	Status	Next Milestone	Number	Est. Value	Potential Bidders	Comments
Manpack Radio	USA	Eval	Award 1QFY17	~66K	\$12.7B	COL, GD, HRS	Downselect to 2 manufacturers likely, FRP 4Q18
Rifleman Radio	USA	Eval	Award 2QFY17	~193K	\$3.9B	HRS, Thales	Procurement could be reduced by 2-channel Leader buy
3-D Exp. LR Radar (3DELRR)	USAF	Eval	Award 2QFY17	35	\$1.5B	LMT, NOC, RTN	Amended RFP for EMD and production options
Amphibious Combat Vehicle (ACV 1.1)	USMC	Eval	Award FY18	220	\$1.2B	BAE, SAIC	Each co. building 16 for evaluation
Family of Medium Tactical Vehicles	USA	RFP	Award 3QFY17	~2,400	Unk	OSK	FFP production FY20, 5yr contract + 2 1yr options
Presidential Aircraft Replacement	USAF	RFP	Award 3QFY17	2	\$3.2B+	BA sole source	747-8 award in FY17, competitions for subsystems FY18
Long Range Standoff Weapon (LRSO)	USAF	RFP	Award 4QFY17	1000	\$9B-\$20B	BA, LMT, RTN	2 36-mon. contracts for tech maturation, risk reduction
Ground Based Strat Deterrent (GBSD)	USAF	RFP	Award 4QFY17	400+	\$62B-\$85B+	BA, LMT, NOC	2 36-mon. contracts for tech maturation, risk reduction
F-16 AESA Radar Upgrade	USAF	RFP	Award FY17	300	\$1B-\$1.5B	NOC, RTN	Congress required full and open competition, NOC FMS
JSTARS Recapitalization	USAF	RFP	Award FY17	17	~\$7B	BA, LMT, NOC/LLL/GD + NOC, RTN	Aircraft/radar could be separate decisions
T-X Trainer	USAF	RFP	Award FY17	<473	<\$16.3B	BA/SAAB, LMT/KAI, NOC	RTN/Leonardo dropped, NOC uncertain
UH-1N Helicopter Recap	USAF	Draft RFP	Award FY18	~84	\$2.4B+	BA, LMT, TXT, Airbus, Leonardo	Industry day Sept '16, award FY18; could be split buy
Small Airborne Net Radio (SANR)	USA	Draft RFP	Award FY17	7K/10yrs	\$1.7B+	COL, HRS	5yr IDIQ, Helicopter/UAV radio, replace ARC-201D
Fixed-Wing Utility Aircraft (FUJA)	USA	Draft RFP	RFP FY17	92+	~\$1.6B	TXT	C-12/C-26 replacement
Carrier Unmanned Tanker (MQ-25A)	USN	Pre-RFP	Award FY18	Unk	~\$3B R&D	BA, General Atomics, LMT, NOC	Risk reduction contracts awarded (4), RFP summer '17
Weather System Follow-on (WSF)	USAF	Pre-RFP	RFP release	3	\$533M		3 satellite program, demo launch in FY17
Mobile Protected Firepower	USA	AoA	Award FY19	TBD	\$3B	BAE, GD	New Army light tank, Milestone B FY19, IOC FY23
Ground Mobility Vehicle	USA	AoA	Award FY17	975	TBD	GD, OSK, PII, NAV, AM Gen	Air-dropped recon truck, non-developmental item
Long Range Precision Fires	USA	pre-RFP	Award FY20	TBD	TBD	LMT, RTN	ATACMS replacement, LMT-RTN each award RR contract
Patriot Radar Upgrade/Replacement	USA	RFI	RFP release	Unk	Unk	LMT, NOC, RTN	Total LTAMDS scope unclear, 3QFY17 TMRR contract
2-Channel Squad Leader Radio	USA	RFI	RFP May	~100K	TBD	HRS, Thales	RFP 5/17, IDIQ award 9/17, full rate production 5/18
Future Vertical Lift	USA	RFI	17 prototypes	~4,000	TBD	TXT-LMT, LMT-BA	H-60/H-1 replacement, two teams to fly prototypes this y
Extra Large Unmanned Undersea Vehicle	USN	RFI	RFP release	5+	TBD	BA sole source blocked	2 contracts for 18-mon. design phase then downselect

Source: Cowen and Company, DoD

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