

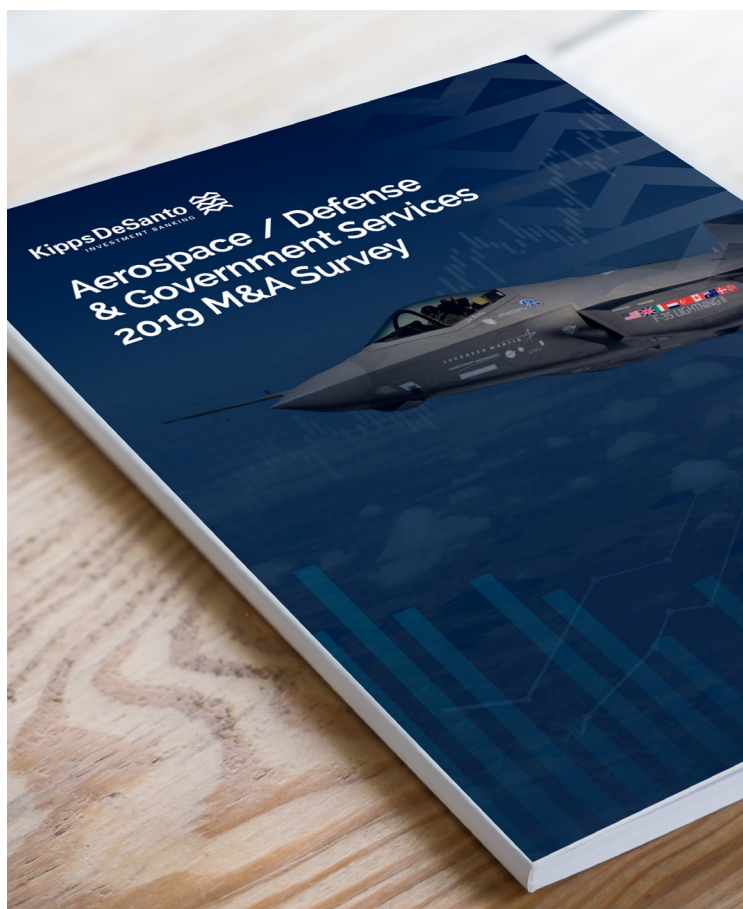


# *KippsDeSanto & Co.* **MarketView** Winter 2019

Aerospace / Defense &  
Government Services

**Kipps DeSanto**   
INVESTMENT BANKING

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## KippsDeSanto's Aerospace / Defense & Government Services 2019 M&A Survey

KippsDeSanto is pleased to share its second annual survey of merger and acquisition (M&A) activity and sentiment in the Aerospace / Defense and Government Services sectors.

In this study, we asked key dealmakers from relevant sectors to share their predictions about M&A deal activity and valuations over the next year. We also asked them to share their insights on strategic drivers of M&A activity, including U.S. midterm elections and predictions on the 2019 credit market.

Respondents are optimistic about the overall economy and M&A activity in the near- to medium-term. They expect M&A volume and valuations to remain strong, similar to 2018 levels due in part to robust defense spending and economic confidence.



Click [here](#) to access KippsDeSanto's 2019 Aerospace / Defense & Government Services M&A Survey

**About KippsDeSanto & Co.** KippsDeSanto & Co. is the largest independent investment banking firm exclusively focused on serving leading, growth-oriented Aerospace/Defense, Government Services and Technology companies. We are focused on delivering exceptional M&A and Financing transaction results to our clients via leveraging our scale, creativity and industry experience. We help market leaders realize their full strategic value. Having advised on over 100 industry transactions, KippsDeSanto is recognized for our analytical rigor, market insight and broad industry relationships. There's no substitute for experience.

KippsDesanto, a member of FINRA/SIPC, is not affiliated with other companies mentioned herein. For more information, visit [www.kippsdesanto.com](http://www.kippsdesanto.com).

## KippsDeSanto's Recent Advised Transactions

<p>November 2018</p> <p><b>BEI PRECISION SYSTEMS &amp; SPACE COMPANY</b></p> <p>a portfolio company of</p> <p>J.F. Lehman &amp; Company</p> <p>has acquired</p> <p><b>THISTLE DESIGN</b></p>	<p>October 2018</p> <p>Power Manager Business of</p> <p><b>Protonex</b> a Ballard® company</p> <p>a subsidiary of</p> <p><b>BALLARD</b></p> <p>has been acquired by</p> <p><b>REVISION</b></p>	<p>September 2018</p> <p><b>emagine it</b></p> <p>has received a strategic investment from</p> <p><b>ENLIGHTENMENT CAPITAL</b></p>	<p>September 2018</p> <p><b>CAPEWELL</b> AERIAL SYSTEMS LLC</p> <p>a portfolio company of</p> <p><b>CAPITALWORKS</b></p> <p>has been acquired by</p> <p><b>ARGOSY PRIVATE EQUITY</b></p>	<p>August 2018</p> <p><b>MacB</b> MACBERRY GROUP, INC.</p> <p>has been acquired by</p> <p><b>ALION</b> SCIENCE AND TECHNOLOGY</p> <p>a portfolio company of</p> <p><b>VERITAS CAPITAL</b></p>
<p>July 2018</p> <p><b>GenNx360</b> Capital Partners</p> <p>has acquired</p> <p><b>PAG</b> PRECISION AEROSPACE GROUP, INC.</p> <p>a portfolio company of</p> <p><b>PNC RIVERARCH CAPITAL</b></p>	<p>July 2018</p> <p><b>GERMANE SYSTEMS™</b></p> <p>has been acquired by</p> <p><b>mercury systems™</b></p>	<p>July 2018</p> <p><b>Ai</b> Aitech</p> <p>has been acquired by</p> <p><b>FIMI</b> Opportunity Funds</p>	<p>May 2018</p> <p><b>TMA</b> Complex Problems Solved</p> <p>has been acquired by</p> <p><b>NS2</b> NATIONAL SECURITY SERVICES</p>	<p>April 2018</p> <p>● STRATEGIC RESOURCES ● INTERNATIONAL</p> <p>has been acquired by</p> <p><b>Peraton™</b></p> <p>a portfolio company of</p> <p><b>VERITAS CAPITAL</b></p>
<p>February 2018</p> <p><b>THEMIS</b></p> <p>has been acquired by</p> <p><b>mercury systems™</b></p>	<p>January 2018</p> <p><b>rgs.</b> USFalcon</p> <p>a portfolio company of</p> <p><b>CM EQUITY PARTNERS</b></p> <p>has been acquired by</p> <p><b>USfalcon.</b></p>	<p>January 2018</p> <p><b>BTP Systems</b> Engineering and Technical Services</p> <p>has been acquired by</p> <p><b>serco</b></p>	<p>January 2018</p> <p><b>ADG CREATIVE</b> BE HEARD™</p> <p>has been acquired by</p> <p><b>CHENEGA CORPORATION</b></p>	<p>November 2017</p> <p><b>AVOBE</b></p> <p>has been acquired by</p> <p><b>MAG AEROSPACE</b></p> <p>supported by</p> <p><b>CLAIRVEST</b></p>
<p>October 2017</p> <p><b>WBB</b></p> <p>a portfolio company of</p> <p><b>LAKE CAPITAL</b></p> <p>has been acquired by</p> <p><b>H. I. G. CAPITAL</b></p>	<p>October 2017</p> <p><b>dominion CONSULTING</b></p> <p>has merged with</p> <p><b>TERATHINK</b></p>	<p>September 2017</p> <p><b>JBS INTERNATIONAL</b></p> <p>has been acquired by</p> <p><b>South Carolina</b></p>	<p>July 2017</p> <p><b>NE5</b> Net-Centric Enterprise Solutions</p> <p>has been acquired by</p> <p><b>CSRA</b></p>	<p>April 2017</p> <p><b>BEI PRECISION SYSTEMS &amp; SPACE COMPANY</b></p> <p>a subsidiary of</p> <p><b>INNOVISTA SENSORS</b></p> <p>a portfolio company of</p> <p><b>THE CARLYLE GROUP</b></p> <p><b>PAI</b> and <b>Schneider Electric</b></p> <p>has been acquired by</p> <p>J.F. Lehman &amp; Company</p>



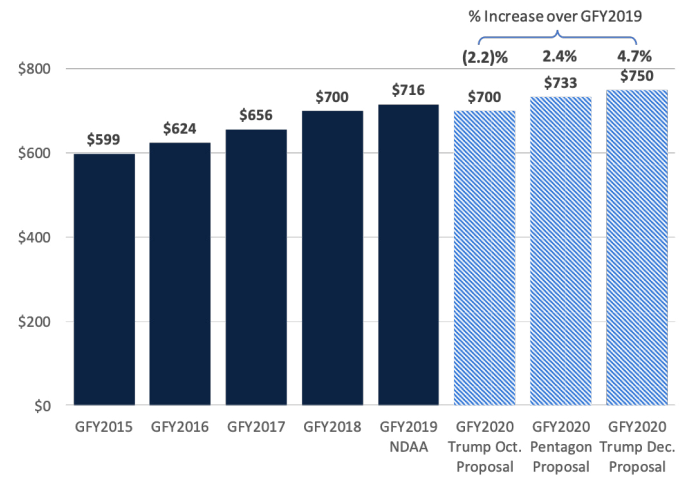
## Operational / Funding Environment

In October, President Trump stated defense spending in Government Fiscal Year ("GFY") 2020P would be \$700 billion, in line with the 5% cuts made across federal government agencies, but different from the \$716 billion outlined in the omnibus spending package passed in September. However, Trump quickly reversed course in December, suggesting a new GFY2020P defense budget of \$750 billion. With Democrats capturing the House of Representatives and Republicans expanding their majority in the Senate during the recent mid-term elections, the proposed defense budget increases will likely face increased opposition. As a result of these changes to Congress, reports have suggested the proposed \$750 billion budget is purely a negotiating tactic to ensure the Democratic opposition does not push the defense budget below target funding regardless of the recently announced drawdown of troops in Syria and Afghanistan. The target funding of \$733 billion was laid out by Secretary of Defense James Mattis, who resigned in December, and House Armed Services Committee Chair Mac Thornberry.

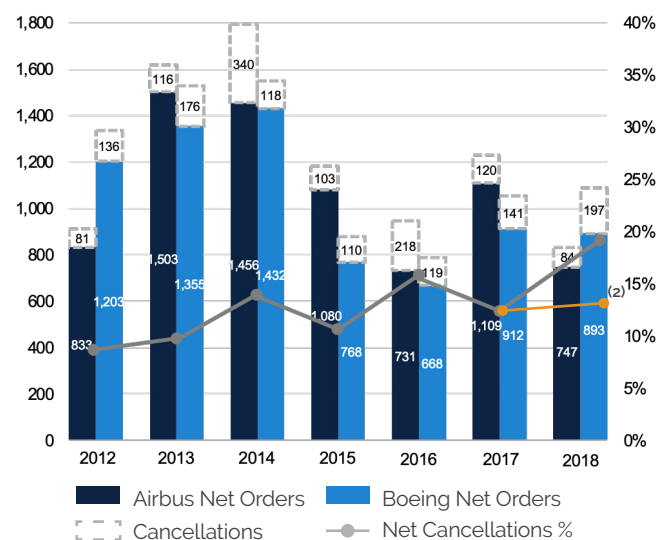
Boeing outpaced Airbus throughout 2018 and hit its delivery target of 806 aircrafts for the year with strong 737 delivery activity in November (61) and December (69). Boeing overcame issues with its engine supplier, CFM International, earlier in the year, which slowed production rates during 3Q18. Although CFM International is meeting more of its commitments, it must increase its LEAP engine production by 60% in 2019 to meet Boeing's production needs, which could lead to deliveries being pushed to the second half of 2019. After only 500 aircraft deliveries through 3Q18, Airbus maintained its target of 800 aircraft deliveries for the year – this was partially made possible by including orders for 18 A220 models, the rebranded name of the recently acquired Bombardier CSeries aircraft. Throughout the year, Airbus struggled to maintain its delivery schedule due to engine delays and industrial slowdowns related to increased automation of its manufacturing processes. Ultimately, due to a strong 4Q18, Airbus's deliveries were in line with its target of 800 aircrafts. The company expects these automation issues to be largely resolved during 2019.

In the government technology solutions sector, despite the recent partial government shutdown, budgetary outlook remains strong, with Department of Defense ("DoD") appropriations for GFY2019 representing \$46.4 billion of the department's overall IT budget, a 3% increase from GFY2018. Factors driving the favorable budgetary environment over the next couple of years include the development of the Joint Artificial Intelligence Center ("JAIC") to accelerate the delivery of AI to federal agencies, increased demand for offensive and defensive cyber capabilities, an ongoing shift towards cloud computing and automation, and the reestablishment of the U.S. Space Command ("USSPACECOM"). Amid increasing adversary capabilities in the space and cyber domains, President Trump has been pushing the DoD to bolster the U.S.'s ability to respond to these threats. The outlook for civilian agencies is also positive, as modernization efforts continue to receive funding and support from policymakers. A less conservative approach is anticipated from civilian agencies heading into GFY2019, given over \$70 billion unspent allocated funds in GFY2018 due to anticipated funding cuts that ultimately never came and the overall budget's late passage. Leading the continued efforts to modernize federal agencies, the Office of Management and Budget's ("OMB") Cloud Smart initiative offers a path for agencies to safely migrate their legacy systems to a cloud network. OMB's cloud strategy goal is to help agencies fully integrate cloud messaging platforms, consolidate a fragmented cloud acquisition market, and discover innovative cloud applications in the federal space. Another key aspect of modernization is the implementation of Robotic Process Automation ("RPA"), software-enabled bots that automate repetitive, labor-intensive tasks. The OMB promotes RPA as a technology that can reduce costs and human error in understaffed agencies. Overall, modernization efforts towards cloud, automation, AI, and machine learning are expected to be well supported in GFY2019, making organizations more efficient and effective.

## Fluctuating GFY2020 Defense Budget Proposals



## Boeing and Airbus Net Orders & Deliveries<sup>(1)</sup>



(1) Airbus and Boeing Research

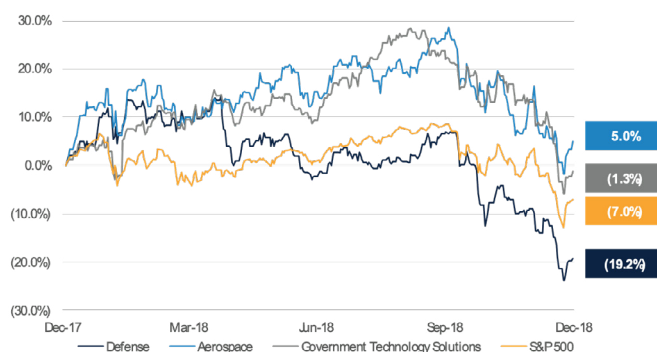
(2) Boeing recently adopted accounting standard ASC 606, which removed 78 orders

## Capital Markets and Public Market Valuation Trends

The aerospace, defense, and government technology solutions indices experienced mixed results throughout 2018, with each experiencing a sell-off in 4Q18. The aerospace index, which was down 22% in 4Q18, declined 5% during the year. Notable strong performers for the year, include TransDigm, which struggled during 4Q18 with an 8.1% decline, but surged during the year with a price increase of 23.6%. Investors reacted positively to its announcement of a \$4 billion acquisition of Esterline, which will expand the company's portfolio of proprietary products for aerospace and defense markets. Alternatively, Bombardier struggled throughout the year, down 59.2% in 4Q18 and 37.1% for the year. The business faced executive compensation regulatory issues, as well as sluggish growth in CSeries aircraft revenue, despite selling a 50% stake of the aircraft line to Airbus in an effort to increase orders through accessing Airbus' extensive sales network. In line with the overall aerospace index's decrease in share price during 4Q18, the median enterprise value ("EV") / next twelve months ("NTM") EBITDA multiple fell to 10.2x, after reaching a high of 11.6x in 3Q18. Although the aerospace index decreased in 4Q18 as a result of the broader market selloff, the index outperformed the S&P 500 by 12.0% during the year.

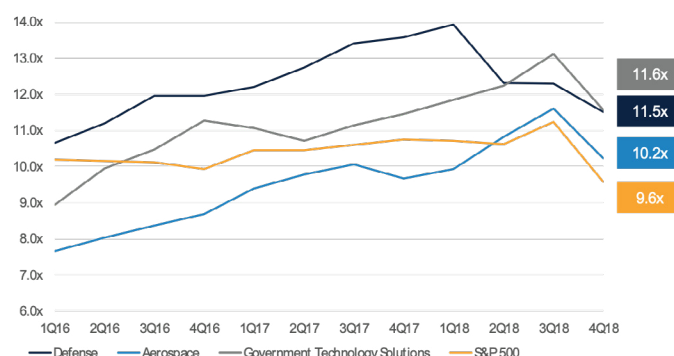
### Relative Stock Price Performance<sup>(1)</sup>

For the Twelve Months Ended December 31, 2018



### Median Quarterly EV / NTM EBITDA Multiples<sup>(1)</sup>

For the Quarter Ended December 31, 2018



The defense index was also impacted by the general volatility in the equities markets, ending the quarter down 26.1% and bringing the index into negative territory for the year at a 19.2% decline in 2018. Sector valuations have also dipped slightly, with an EV / NTM EBITDA multiple of 11.5x, a reversal from the multi-year high point of 13.9x set earlier this year. All companies in the defense sector realized double digit price declines in the quarter, ranging from (18.3)% for L3 Technologies to (28.0)% for BAE Systems, as general macroeconomic headwinds, such as global trade concerns, a rising interest rate environment, and budgetary uncertainty have negated operational results and dragged down equity prices. Following President Trump's surprise announcement in mid-October that he was exploring budget cuts in GFY2020 for all federal departments, including the Department of Defense, the defense index has lagged the S&P 500 by over 10%. However, despite the volatile quarter, companies in the sector continue to report strong operating results, as nearly every firm in the sector reported earnings that met or exceeded investor expectations.

The government technology solutions index ended 2018 down 1.3%. After a strong year of defense spending and generally positive market sentiment, the sector was impacted by a market-wide pull-back in December. The index peaked at a 28.4% gain in September, but a 19.3% decline in the fourth quarter ended a streak of six consecutive positive quarters for the sector. The market turbulence further impacted valuations in which the index's EV / NTM EBITDA multiple declined from 13.1x in 3Q18 to 11.5x, moving the market back in line with 4Q17 valuation multiple levels. Booz Allen, KeyW and ICF finished 2018 with stock price returns greater than 10%. Booz Allen Hamilton finished +18.7% (down 9.1% for the quarter) behind multiple large contract awards (including a \$1.0 billion cyber defense contract) and a second quarter fiscal 2019 earnings announcement where the company reported 10% year-over-year ("YoY") growth in adjusted EBITDA. KeyW finished the year +12.4% (down 24.3% for the quarter) after reporting third quarter 2018 adjusted EBITDA of \$13.7 million, a 19.1% YoY increase, and paying down \$10.0 million of debt. ICF's shares finished +20.4% for the year (down 10.8% for the quarter) after a strong second quarter fiscal 2018 where its diluted earnings per share amounted to \$0.71, a 12.7% YoY increase, and reported growth in both government and commercial revenues. SAIC was among several firms to finish with negative returns for both the quarter (19.3%) and year (17.9%), mainly due to mixed reaction to its \$2.5 billion acquisition of Engility, which closed in January. However, continued optimism around defense spending, and funding support for national security priorities provide positive momentum for the sector heading into 2019. Of note, the index outpaced the S&P 500 by 5.7% on the year and EV / NTM EBITDA multiples finished a premium to the S&P 500's for the tenth consecutive quarter.

(1) S&P Capital IQ, company filings, and KippsDeSanto research

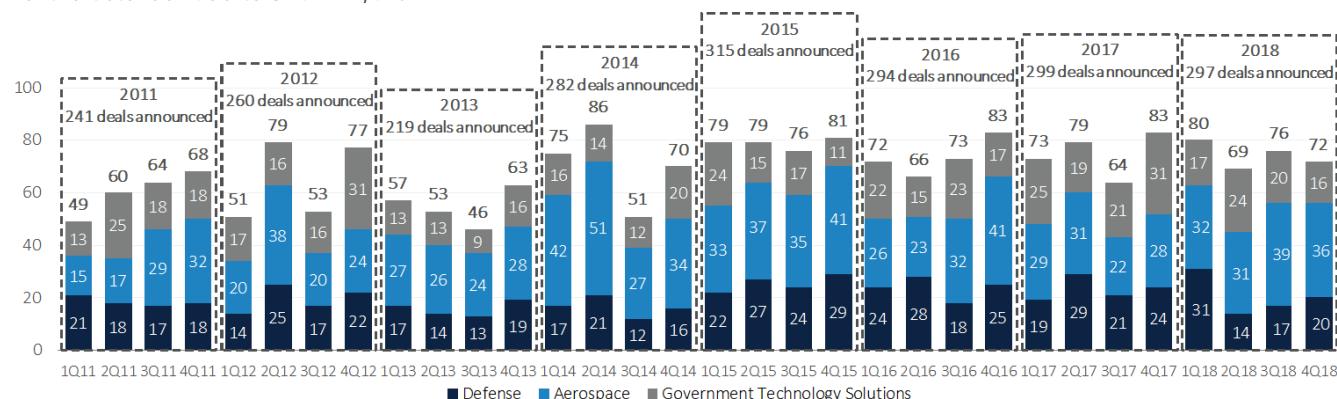
## M&A Trends & Activity

There were 72 aerospace, defense, and government technology solutions M&A transactions announced during 4Q18, bringing the final year-end count to 297 deals. M&A activity in 4Q18 represents a slight decrease compared to the transaction levels seen from 2014 – 2017. The aerospace and defense sectors maintained a transaction cadence consistent with 2016 and 2017, with 220 combined transactions in 2018, while a slight slowdown in government technology solutions M&A volume, relative to an exceptionally strong 2017, contributed to the lower overall deal activity throughout the second half of the year.

With a final aerospace transaction tally of 138, 2018 was the sector's most active year since 2015, and 4Q18 ranked as the third largest quarter since the beginning of 2016 (36 transactions). There was continued consolidation in the aerospace sector throughout the year, as OEMs turned to acquisitions to make transformational moves in a strategic effort to shore up their supply chains and generate high margin services and aftermarket revenue. Most recently, in October, TransDigm announced that it had agreed to acquire Esterline Technologies for \$4.1 billion in a deal which provides TransDigm with a significantly broadened portfolio of proprietary aerospace parts. This deal was the latest in a line of similar \$500+ million acquisitions announced in the sector in 2018, following Singapore Engineering's \$630 million acquisition of General Electric's Middle River Aviation Systems announced in September, Boeing's \$4.2 billion acquisition of KLX announced in May, Melrose Industries' \$12.3 billion acquisition of GKN announced in March, and TransDigm's \$525 million acquisition of Extant Components, announced in March.

### M&A Transaction Volume<sup>(1)</sup>

For the Calendar Quarters 1Q11 – 4Q18



The 20 defense transactions announced in the fourth quarter brought the year's total deal count to 82; while this total is lower than the high level of transaction activity witnessed from 2015 to 2017, the defense sector, specifically with respect to defense electronics and components, remains a compelling area of investment. Strategic buyers sought to consolidate and build their technology portfolios, while financial sponsors targeted platform investments, maintaining their view that the sector can create value in the near-to mid-term. Of particular note, Harris Corporation and L3 Technologies announced plans to merge in an all stock deal valued at roughly \$18.7 billion. As one of the largest defense transactions in history, this would create a "sixth" U.S. defense prime, one uniquely focused primarily on defense electronics, sensors, communications equipment, and other next-gen technologies. On the financial sponsor side, Cerberus Capital announced its intention to acquire Sparten Corporation for \$182 million, marking one of the larger publicly announced private equity transactions in 2018, and continuing the trend of defense electronic components and systems attracting significant demand in the marketplace.

After steady activity of ~20 government technology solutions deal announcements per quarter through September 2018, there was 16 announced transactions in the fourth quarter. There were nearly 80 deal announcements in 2018, the second highest since 2013, albeit about 20% lower than 2017. This year-over-year decline was largely attributable to fewer acquisitions by mid-tier private company buyers to include tuck-ins for existing private equity-backed platforms. Private company buying activity specifically dropped nearly 30% from 2017. Anecdotally, the decline was motivated by increased interest in these companies exploring their own exit strategies and / or prioritizing organic growth given the more favorable funding environment. Despite fewer announcements overall, 2018 marked a record year for larger deals (EV or target revenue greater than \$100 million). These larger deals had the second highest year on an absolute basis since 2009, and represented a greater proportion of overall announcements. 2018 saw 18 deals greater than \$100 million (23% of 2018 deal announcements), showcasing buyers' meaningful acquisitions that add scale, enhance customer reach, and deepen capability offering. In 2018, these larger deals also traded at premiums with median transaction multiple in excess of 10.0x, compared to the industry median of ~8.5x across all transactions. Marquee mega deals for the year included OnAssignment's acquisition of ECS Federal for \$775 million, General Dynamics acquisition of CSRA for \$9.7 billion, and SAIC's recently closed acquisition of Engility for \$2.5 billion.

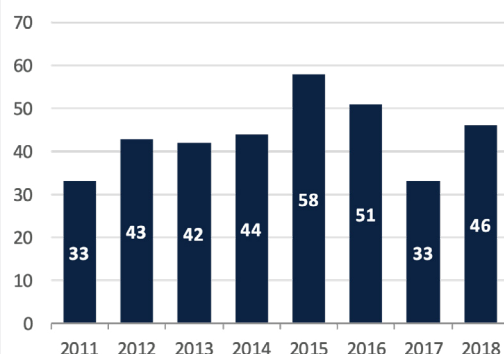
(1) S&P Capital IQ, company filings, and KippsDeSanto research

## Aerospace Update

### Major Aerospace Companies Are Reshaping Their Portfolios To Return To Core Competencies

Both UTC and Bombardier, Inc. have divested several noncore assets to shift attention towards central focus areas. Following the approval of its acquisition of Rockwell Collins, UTC recently announced plans to spin off its Otis Elevator division and Carrier Building Systems business. This separation will leave UTC as a pure-play aerospace company moving forward. In November, Bombardier announced its intent to divest its Q-series Turboprop Passenger business segment to Viking Air, a portfolio company of Longview Aviation Capital, for an estimated \$300 million, and its Technical Training Business unit to CAE, for an estimated \$650 million. These announcements came as Bombardier continues to reposition the company to prioritize its business aircraft division. As part of this restructuring initiative, Bombardier's management has indicated it will continue to explore strategic alternatives for its existing commercial aircraft divisions.

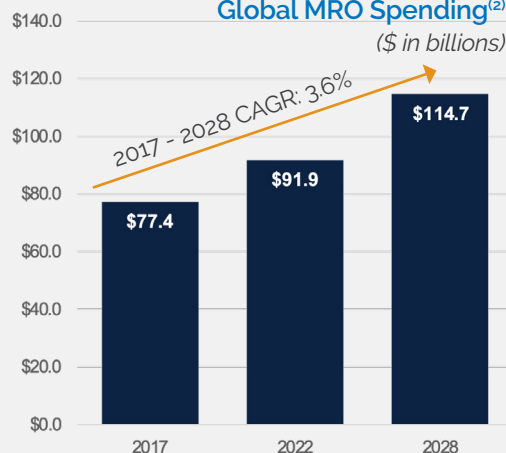
Aerospace & Defense Divestitures<sup>(1)</sup>



### Robust MRO Sales Highlight Market Strength And Contribute A Healthy M&A Environment

Aircraft aftermarket service sales approached 10% year-over-year growth in 3Q18, reflecting some of the strongest maintenance, repair, and overhaul ("MRO") market conditions in several years. Favorable macroeconomic trends, including robust global air travel, a healthy military budget, and the Pentagon's renewed focus on maintenance and upgrades have driven MRO market strength. Considering the frothy MRO and M&A landscapes, Veritas Capital has agreed to sell its portfolio company, StandardAero Aviation Holdings, Inc., to The Carlyle Group for an estimated \$5 billion. StandardAero has a global presence and is one of the largest MRO providers for Boeing and Airbus' aircrafts, engines, business jets, and helicopters. This transaction caps off a series of recent notable M&A transactions in the MRO space, including Air Transport Services Group's pending acquisition of Omni Air International and Wencor Group's acquisition of Silver Wings Aerospace, Inc.

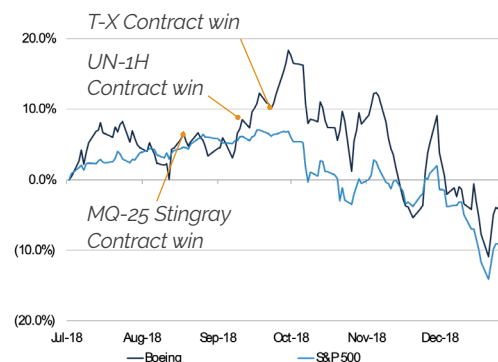
Global MRO Spending<sup>(2)</sup>



### Boeing / SAAB Win Air Force Award To Supply Next-Generation Training Jets

The U.S. Air Force ("USAF") selected a joint bid from a Boeing-Saab partnership for the award of a \$9.2 billion contract to supply next-generation training jets. This contract is expected to be the USAF's last major procurement opportunity for the foreseeable future, considering contracts for fighter jets and helicopters have already been awarded earlier in the year. The USAF plans to purchase 351 T-X aircraft, 46 simulators, and associated ground equipment with an option to buy up to 475 aircraft and 120 simulators in total. The new aircraft will provide USAF pilots with critical training capabilities required to increase operational efficiency and effectiveness. Boeing's award is its third major contract victory since August, following an \$805 million U.S. Navy contract to build four MQ-25 unmanned tankers and a \$2.38 billion USAF contract to manufacture Huey replacement helicopters. These recent wins helped Boeing outperform the S&P 500 throughout the quarter.

Boeing Stock Price Relative to the S&P 500<sup>(3)</sup>



(1) KippsDeSanto research

(2) Oliver Wyman Industry Research Report

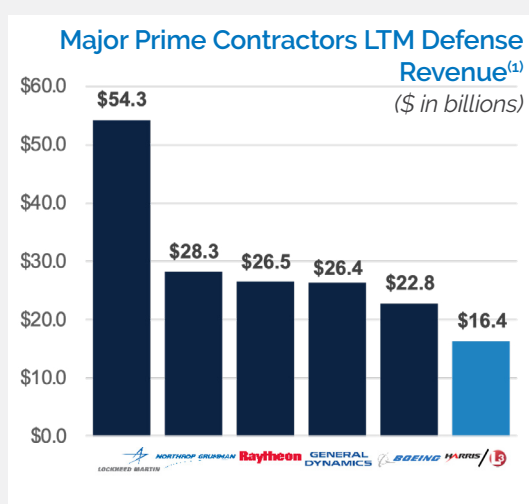
(3) S&P Capital IQ



## Defense Update

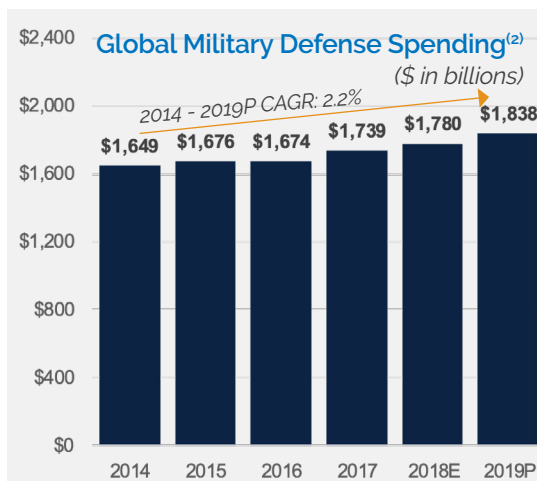
### Harris / L3 to Merge, Creating Sixth Defense Prime

Harris Corporation and L3 Technologies entered into an all-stock merger of equals on October 14, 2018 that, if it clears regulatory approvals, would create the sixth-largest aerospace and defense prime contractor. Combined, the two companies would form a military communications and defense electronics company with approximately \$16 billion in revenue and \$34 billion in market capitalization, based in Melbourne, Florida. The companies were on similar growth trajectories and this combination is intended to create a more agile, integrated, and innovative prime focused on critical, next-generation technology. This deal marks the latest in a flurry of large transactions among government and defense contractors looking to take advantage of favorable defense spending. This merger also provides a meaningful value creation opportunity for the combined firm through increased scale with a well-balanced portfolio of complementary franchises.



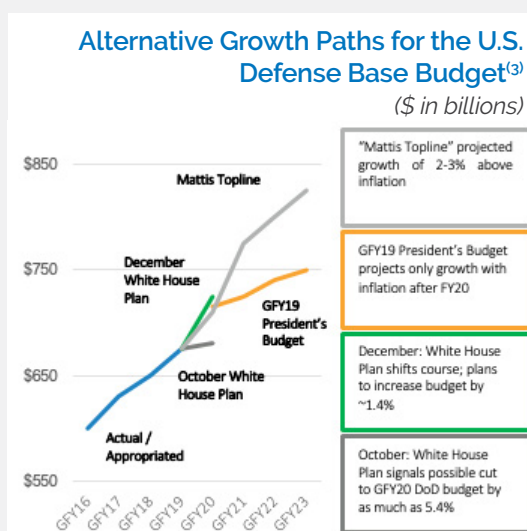
### Global Military Spending Is At Record Levels And Expected To Maintain Growth Trajectory

Global military expenditures are estimated to have reached \$1.74 trillion in 2017; the highest it has been since the end of the Cold War, and do not seem to be slowing down anytime soon. This amount accounted for approximately 2.2% of global gross domestic product in 2017. The increase in world military expenditures in recent years has been largely due to substantial spending growth by countries in Asia, Oceania, and the Middle East. At the global level, the weight of military spending is seemingly shifting away from the Euro-Atlantic region, resulting in increased international revenue for many defense contractors. However, the U.S. continues to have the highest military expenditures in the world at \$700 billion in GFY2018. The U.S. spends more on its military than the next seven highest-spending countries combined and will continue to be the dominant military spender due to recent increases in military personnel and initiatives to modernize weapons platforms.



### Deputy Secretary Of Defense Patrick Shanahan Will Become Acting Secretary Of Defense

Following Defense Secretary Jim Mattis' resignation, Trump announced the appointment of Deputy Secretary of Defense, Patrick Shanahan, as acting Secretary of Defense. Mattis decided to step down earlier than expected following disagreements over the withdrawal of U.S. troops abroad. Patrick Shanahan, a former Boeing executive, will likely be on the short list of candidates to become the next permanent Secretary of Defense. Following Shanahan's promotion, he emphasized that his job is, "to 'operationalize' the National Defense Strategy by rewiring the organization to increase performance on lethality, alliances, and reform." With this notion, Shanahan has aligned his focus on the GFY20 budget and believes it will be the Trump administration's masterpiece and set the stage for the future of DoD spending.



(1) Source: S&P Capital IQ and most recent Company 10-K's

(2) Stockholm International Peace Research Institute Military Expenditure Database

(3) Avascent Research Report; U.S. DoD



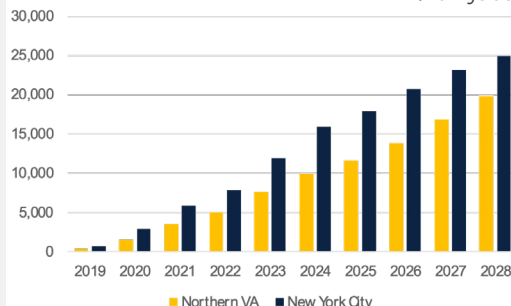
## Government Technology Solutions Update

### Amazon's East Coast Push

Amazon announced HQ2 would be split between two major metropolitan areas: Crystal City, VA in the D.C. Metro area and Long Island City, NY. With the U.S. Government's focus on technology modernization, Amazon's physical presence in the D.C. region will impact the federal contracting market. Amazon has already asserted its role in the federal space with Amazon Web Service's ("AWS") competition for the highly contentious \$10.0 billion Joint Enterprise Defense Infrastructure ("JEDI") award. While industry leaders have noted Amazon's draw on a limited talent pool, Amazon's magnetism should entice both technology labor and additional companies to the area. Amazon's move to the D.C. region will take time, however, and that window should allow contractors an opportunity to take advantage of an influx of technology talent, as well as assess their labor acquisition strategies (e.g. through "onshoring") to prepare for Amazon's arrival.

### Expected 10 Year Cumulative Growth of New Hires at Amazon's Second Headquarters ("HQ2") Locations<sup>(1)</sup>

(new jobs)



### RPA Drives Operational Efficiency For Government

In parallel with the U.S. government's efforts to shift legacy networks to the cloud, RPA, or the automation of routine, administrative clerical tasks, has risen as an essential and relatively untapped tool for government contractors to increase firm efficiency. RPA consists of enterprise-grade software that alleviates the burdens of back-office functions, including Customer Relationship Management, Enterprise Resource Planning, and customer services. This search for a more agile and cost effective back office has created a global RPA market, which is expected to grow to \$2.4 billion by 2022<sup>(2)</sup>. Given the growing federal need for these solutions, many government contractors are looking to add capabilities via internal investments, partnerships with commercial companies, and M&A, in order to gain first mover advantages.

### How RPA Can Drive Efficiency in Agencies<sup>(2)</sup>

Increase Throughput:

**3 - 5X**



Reduce Transactional Costs by up to:

**60 - 85%**



Improve Processing Times by up to:

**80%**

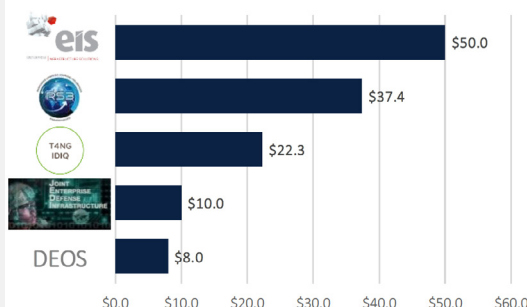


### Healthy Contract Funding Environment Creates Continued Growth Opportunities

Over the past year, the prevalence of large, single and multi-award task orders and IDIQ procurements has dominated the federal IT contracting landscape. The DoD's \$10.0 billion JEDI and \$8.0 billion Defense Enterprise Office Solutions ("DEOS") proposals—responses to an administrative wide push to upgrade aging IT infrastructures—reflect the positive funding environment for NextGen IT services. Similarly, the recent on-ramp for the Army's \$37.4 billion RS3 IDIQ and upcoming GSA OASIS on-ramps will further enhance the government's ability to procure solutions from an increasing number of capable suppliers. As a primary M&A driver, the government's recent proclivity for acquiring services through these larger vehicles and contracts should benefit those contractors possessing these sought-after contract positions.

### 2018 Large IDIQ Vehicles and Single Award Task Orders

(\$ in billions)



(1) Source: Wall Street Journal: Why the Amazon Invasion in New York and Virginia Will be Slow

(2) Source: Deloitte: Process Robotics in Federal Government

(3) Source: Gartner: Gartner Says Worldwide Spending on Robotic Process Automation Software to Reach \$680 Million in 2018

## Public Company Trading Analysis<sup>(1)</sup>

(\$ in millions, except per share amounts)

Aircraft and Engine OEMs	Stock Price 01/11/19	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Boeing	\$352.82	89.5%	\$200,242	\$202,208	\$99,559	\$13,563	13.6%	\$106,614	\$16,271	15.3%	2.03x	14.9x	1.90x	12.4x
Airbus SE	101.39	79.5%	78,656	81,174	72,082	8,435	11.7%	79,392	9,980	12.6%	1.13x	9.6x	1.02x	8.1x
General Electric Co	8.94	46.7%	77,761	196,019	119,480	13,603	11.4%	118,423	15,800	13.3%	1.64x	14.4x	1.66x	12.4x
Safran SA	121.09	86.3%	51,828	56,888	23,969	4,397	18.3%	26,452	5,005	18.9%	2.37x	12.9x	2.15x	11.4x
MTU Aero Engines AG	196.28	86.1%	10,135	11,317	5,055	941	18.6%	5,447	1,018	18.7%	2.24x	12.0x	2.08x	11.1x
<b>Median</b>		<b>86.1%</b>	<b>\$77,761</b>	<b>\$81,174</b>	<b>\$72,082</b>	<b>\$8,435</b>	<b>13.6%</b>	<b>\$79,392</b>	<b>\$9,980</b>	<b>15.3%</b>	<b>2.03x</b>	<b>12.9x</b>	<b>1.90x</b>	<b>11.4x</b>

Aerostructures	Stock Price 01/11/19	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Spirit AeroSystems	77.36	73.5%	8,237	9,449	7,252	1,089	15.0%	7,782	1,225	15.7%	1.30x	8.7x	1.21x	7.7x
Hexcel	60.51	82.4%	5,199	6,142	2,183	504	23.1%	2,387	563	23.6%	2.81x	12.2x	2.57x	10.9x
Senior plc	2.77	64.1%	1,156	1,352	1,349	173	12.8%	1,423	189	13.3%	1.00x	7.8x	0.95x	7.1x
Triumph Group	13.76	45.8%	685	2,280	3,414	201	5.9%	3,457	258	7.5%	0.67x	11.3x	0.66x	8.8x
<b>Median</b>		<b>64.1%</b>	<b>\$1,156</b>	<b>\$2,280</b>	<b>\$2,183</b>	<b>\$201</b>	<b>12.8%</b>	<b>\$2,387</b>	<b>\$258</b>	<b>13.3%</b>	<b>1.00x</b>	<b>11.3x</b>	<b>0.95x</b>	<b>8.8x</b>

Aerospace Suppliers	Stock Price 01/11/19	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Arconic	19.72	63.3%	9,476	14,367	14,003	1,932	13.8%	14,477	2,131	14.7%	1.03x	7.4x	0.99x	6.7x
Meggitt PLC	6.38	85.2%	4,929	6,411	2,608	576	22.1%	2,762	633	22.9%	2.46x	11.1x	2.32x	10.1x
Curtiss-Wright	107.46	74.9%	4,706	5,274	2,452	484	19.7%	2,603	528	20.3%	2.15x	10.9x	2.03x	10.0x
Esterline Technologies	121.45	99.4%	3,584	3,896	2,035	305	15.0%	2,082	316	15.2%	1.91x	12.8x	1.87x	12.3x
FBC Bearings	131.44	77.4%	3,169	3,233	705	177	25.2%	780	199	25.5%	4.59x	18.2x	4.14x	16.2x
Moog Inc.	80.93	86.2%	2,973	3,709	2,759	360	13.0%	2,910	414	14.2%	1.34x	10.3x	1.27x	9.0x
Astronics	30.99	72.1%	1,082	1,337	796	95	11.9%	834	120	14.3%	1.68x	14.1x	1.60x	11.2x
Ducommun	37.07	81.3%	425	651	622	64	10.4%	641	75	11.7%	1.05x	10.1x	1.02x	8.7x
Héroux-Devtek	9.33	73.9%	343	383	310	45	14.6%	410	61	14.8%	1.23x	8.5x	0.93x	6.3x
<b>Median</b>		<b>77.4%</b>	<b>\$3,169</b>	<b>\$3,709</b>	<b>\$2,035</b>	<b>\$305</b>	<b>14.6%</b>	<b>\$2,082</b>	<b>\$316</b>	<b>14.8%</b>	<b>1.68x</b>	<b>10.9x</b>	<b>1.60x</b>	<b>10.0x</b>

Aftermarket / MRO	Stock Price 01/11/19	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
TransDigm Group	348.07	92.2%	18,456	29,249	3,915	1,937	49.5%	4,237	2,121	50.1%	7.47x	15.1x	6.90x	13.8x
HECO	78.45	83.3%	9,305	10,014	1,827	471	25.8%	1,979	519	26.2%	5.48x	21.3x	5.06x	19.3x
Singapore Technologies Engineering	2.64	96.5%	8,233	8,456	5,048	625	12.4%	5,482	679	12.4%	1.68x	13.5x	1.54x	12.5x
BBA Aviation	2.93	61.7%	3,015	4,209	2,255	443	19.6%	2,535	474	18.7%	1.87x	9.5x	1.66x	8.9x
SA Engineering	1.86	74.8%	2,085	1,791	777	87	11.1%	778	85	10.9%	2.31x	20.7x	2.30x	21.1x
AAR Corp.	39.27	76.2%	1,337	1,530	1,889	127	6.7%	2,115	188	8.9%	0.81x	12.0x	0.72x	8.1x
<b>Median</b>		<b>79.8%</b>	<b>\$5,624</b>	<b>\$6,332</b>	<b>\$2,072</b>	<b>\$457</b>	<b>16.0%</b>	<b>\$2,325</b>	<b>\$496</b>	<b>15.5%</b>	<b>2.09x</b>	<b>14.3x</b>	<b>1.98x</b>	<b>13.1x</b>

(1) S&P Capital IQ, company filings, and KippsDeSanto research

## Public Company Trading Analysis, cont.<sup>(1)</sup>

(\$ in millions, except per share amounts)

Defense Primes	Stock Price 12/31/18	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Boeing	\$322.50	81.8%	\$183,143	\$185,109	\$99,617	\$13,586	13.6%	\$106,504	\$16,246	15.3%	1.86x	13.6x	1.74x	11.4x
Lockheed Martin	261.84	72.1%	74,474	88,362	53,076	8,357	15.7%	56,120	8,981	16.0%	1.66x	10.6x	1.57x	9.8x
General Dynamics	157.21	68.4%	46,558	58,629	36,155	5,205	14.4%	39,517	5,571	14.1%	1.62x	11.3x	1.48x	10.5x
Raytheon	153.35	66.7%	43,640	47,180	27,146	5,199	19.2%	29,042	5,507	19.0%	1.74x	9.1x	1.62x	8.6x
Northrop Grumman	244.90	67.9%	42,519	56,196	30,057	4,557	15.2%	34,280	4,895	14.3%	1.87x	12.3x	1.64x	11.5x
BAESystems	5.85	67.5%	18,691	21,254	23,426	2,764	11.8%	24,721	2,881	11.7%	0.91x	7.7x	0.86x	7.4x
<b>Median</b>		<b>68.1%</b>	<b>\$45,099</b>	<b>\$57,413</b>	<b>\$33,106</b>	<b>\$5,202</b>	<b>14.8%</b>	<b>\$36,899</b>	<b>\$5,539</b>	<b>14.8%</b>	<b>1.70x</b>	<b>10.9x</b>	<b>1.60x</b>	<b>10.2x</b>

Defense Systems	Stock Price 12/31/18	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Safran	120.68	86.2%	48,437	53,497	23,975	4,450	18.6%	26,663	5,073	19.0%	2.23x	12.0x	2.01x	10.5x
L3 Technologies	173.66	77.6%	13,667	16,587	10,173	1,366	13.4%	10,781	1,537	14.3%	1.63x	12.1x	1.54x	10.8x
Huntington Ingalls Industries	190.31	68.8%	8,175	9,389	7,954	1,183	14.9%	8,146	1,104	13.6%	1.18x	7.9x	1.15x	8.5x
FLIR	43.54	68.2%	6,024	5,888	1,795	419	23.3%	1,867	477	25.6%	3.28x	14.1x	3.15x	12.3x
Cobham	1.25	71.3%	2,964	3,037	2,392	349	14.6%	2,468	378	15.3%	1.27x	8.7x	1.23x	8.0x
Kongsberg Gruppen	13.57	57.5%	2,436	2,482	1,637	152	9.3%	2,257	175	7.7%	1.52x	16.3x	1.10x	14.2x
Cubic	53.74	69.5%	1,673	1,794	1,243	110	8.8%	1,414	149	10.6%	1.44x	16.3x	1.27x	12.0x
AeroVironment	67.95	56.0%	1,603	1,314	344	62	17.9%	318	42	13.1%	3.82x	NM	4.13x	NM
<b>Median</b>		<b>69.1%</b>	<b>\$4,494</b>	<b>\$4,462</b>	<b>\$2,093</b>	<b>\$384</b>	<b>14.7%</b>	<b>\$2,363</b>	<b>\$427</b>	<b>13.9%</b>	<b>1.57x</b>	<b>12.1x</b>	<b>1.40x</b>	<b>10.8x</b>

Defense Electronics / Comm.	Stock Price 12/31/18	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Harris	134.65	76.7%	16,169	19,873	6,413	1,388	21.6%	6,897	1,568	22.7%	3.10x	14.3x	2.88x	12.7x
Teledyne	207.07	82.5%	7,471	8,182	2,882	529	18.3%	3,006	563	18.7%	2.84x	15.5x	2.72x	14.5x
Viasat	58.95	73.4%	3,516	4,681	1,884	255	13.5%	2,146	400	18.6%	2.48x	18.3x	2.18x	11.7x
Mercury Systems	47.29	82.6%	2,289	2,456	568	128	22.6%	647	149	23.0%	4.33x	19.1x	3.80x	16.5x
Kratos Defense & Security Solutions	14.09	87.6%	1,462	1,569	642	58	9.1%	722	74	10.3%	2.44x	26.9x	2.17x	21.2x
Ultra Electronics	16.57	73.7%	1,180	1,405	962	165	17.1%	1,004	179	17.8%	1.46x	8.5x	1.40x	7.9x
Comtech Telecommunications	24.34	65.9%	582	734	636	90	14.2%	620	83	13.3%	1.15x	8.1x	1.18x	8.9x
<b>Median</b>		<b>76.7%</b>	<b>\$2,289</b>	<b>\$2,456</b>	<b>\$962</b>	<b>\$165</b>	<b>17.1%</b>	<b>\$1,004</b>	<b>\$179</b>	<b>18.6%</b>	<b>2.48x</b>	<b>15.5x</b>	<b>2.18x</b>	<b>12.7x</b>

Homeland Security	Stock Price 12/31/18	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Smiths Group	17.38	75.4%	6,883	8,075	4,076	827	20.3%	4,293	868	20.2%	1.98x	9.8x	1.88x	9.3x
MSA Safety Incorporated	94.27	85.1%	3,626	3,850	1,356	279	20.5%	1,431	302	21.1%	2.84x	13.8x	2.69x	12.7x
Axon	43.75	57.2%	2,573	2,248	410	63	15.3%	478	80	16.8%	5.48x	NM	4.70x	NM
CSI Systems, Inc.	73.30	88.4%	1,331	1,663	1,108	169	15.3%	1,184	192	16.2%	1.50x	9.8x	1.40x	8.7x
American Outdoor Brands	12.86	80.6%	701	887	633	111	17.5%	651	121	18.6%	1.40x	8.0x	1.36x	7.3x
<b>Median</b>		<b>80.6%</b>	<b>\$2,573</b>	<b>\$2,248</b>	<b>\$1,108</b>	<b>\$169</b>	<b>17.5%</b>	<b>\$1,184</b>	<b>\$192</b>	<b>18.6%</b>	<b>1.98x</b>	<b>9.8x</b>	<b>1.88x</b>	<b>9.0x</b>

(1) S&P Capital IQ, company filings, and KippsDeSanto research  
NM = not meaningful



## Public Company Trading Analysis, cont.<sup>(1)</sup>

(\$ in millions, except per share amounts)

Government Technology Solutions	Stock Price 12/31/18	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Leidos Holdings	\$52.72	72.9%	\$7,895	\$10,438	\$10,185	\$1,054	10.3%	\$10,642	\$1,109	10.4%	1.02x	9.9x	0.98x	9.4x
Booz Allen Hamilton	45.07	85.2%	6,415	7,857	6,500	645	9.9%	6,971	677	9.7%	1.21x	12.2x	1.13x	11.6x
CAQ International	144.03	71.7%	3,579	4,599	4,637	448	9.7%	4,923	449	9.1%	0.99x	10.3x	0.93x	10.2x
Perspecta Inc.	17.22	62.2%	2,824	5,494	4,239	NA	NA	4,318	731	16.9%	1.30x	NA	1.27x	7.5x
SAIC	63.70	68.3%	2,710	3,554	4,587	339	7.4%	4,728	358	7.6%	0.77x	10.5x	0.75x	9.9x
ManTech International	52.30	76.8%	2,078	2,063	1,955	168	8.6%	2,102	186	8.8%	1.06x	12.3x	0.98x	11.1x
ICF International	64.78	78.8%	1,221	1,448	1,314	122	9.3%	1,421	136	9.6%	1.10x	11.8x	1.02x	10.6x
Engility Holdings	28.46	73.8%	1,052	1,915	1,900	172	9.0%	1,948	174	8.9%	1.01x	11.2x	0.98x	11.0x
KeyW	6.69	66.5%	332	596	509	48	9.5%	520	49	9.4%	1.17x	12.4x	1.15x	12.2x
VSE Corporation	29.91	53.4%	325	518	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vectrus, Inc.	21.58	52.0%	243	278	1,267	55	4.4%	1,290	58	4.5%	0.22x	5.0x	0.22x	4.8x
Median		71.7%	\$2,078	\$2,063	\$3,097	\$172	9.3%	\$3,210	\$272	9.3%	1.04x	11.2x	0.98x	10.4x

Engineering & Construction	Stock Price 12/31/18	% of 52 Week High	Market Cap	Enterprise Value	CY2018E			CY2019P			EV / CY2018E		EV / CY2019P	
					Rev.	EBITDA	Margin	Rev.	EBITDA	Margin	Rev.	EBITDA	Rev.	EBITDA
Jacobs Engineering	58.46	71.1%	8,321	9,769	15,974	1,200	7.5%	16,293	1,295	7.9%	0.61x	8.1x	0.60x	7.5x
AECOM	26.50	66.4%	4,143	7,069	20,219	858	4.2%	20,411	982	4.8%	0.35x	8.2x	0.35x	7.2x
Babcock International	6.24	56.4%	3,146	4,972	6,772	875	12.9%	6,851	863	12.6%	0.73x	5.7x	0.73x	5.8x
Tetra Tech	51.77	71.3%	2,866	2,996	2,215	254	11.5%	2,302	270	11.7%	1.35x	11.8x	1.30x	11.1x
KBR	15.18	68.3%	2,139	2,751	4,854	448	9.2%	5,395	433	8.0%	0.57x	6.1x	0.51x	6.4x
Median		68.3%	\$3,146	\$4,972	\$6,772	\$858	9.2%	\$6,851	\$863	8.0%	0.61x	8.1x	0.60x	7.2x

(1) S&P Capital IQ, company filings, and KippsDeSanto research  
NM = not meaningful

## Select Recent Aerospace / Defense M&A<sup>(1)</sup>

(\$ in millions)

Announce Date	Buyer / Investor	Target	Target Description	EV	Revenue	EBITDA	EBITDA Margin	EV / LTM Rev.	EBITDA
12/19/18	Teledyne Technologies, Inc.	Imaging Business of Roper Technologies	Provides a range of imaging solutions, primarily for life sciences, academic research and customized OEM industrial imaging solutions	\$225.0	ND	ND	ND	ND	ND
12/17/18	Spartan Motors, Inc.	Strobes-R-U's, Inc.	Provides upfit services for government and non-government vehicles	ND	ND	ND	ND	ND	ND
12/17/18	Optomec, Inc.	Huffman Corporation	Provides 3D metal printing systems for additive repair of gas turbine components	ND	ND	ND	ND	ND	ND
12/12/18	Cerberus Capital Management	Sparton Corporation	Provides complex and sophisticated electromechanical devices with a multitude of capabilities that span concept development to design to production and refurbishment	253.8	\$381.7	\$27.9	7.3%	0.66x	9.1x
12/12/18	MCM Capital Partners	Andover Corp.	Provides the design and manufacture unique filters and coatings solving their customers difficult optic problems	ND	ND	ND	ND	ND	ND
12/11/18	Lincoln Electric Holdings, Inc.	Coldwater Machine Company, LLC	Provides flexible automation integrator and precision machining and assembly manufacturer (jet engine stands)	ND	55.0	ND	ND	ND	ND
12/07/18	Guardian Capital Partners	Tactical Medical Solutions, Inc.	Provides patented products and kitted solutions for emergency trauma care reaching end markets including military, law enforcement, and various other first responders	ND	ND	ND	ND	ND	ND
12/06/18	Sun Capital Partners, Inc.	Tier One Relocation, LLC	Provider of door-to-door household moving services for the military	ND	ND	ND	ND	ND	ND
12/03/18	Liberty Hall Capital Partners	Aircraft Performance Group, Inc.	Provides proprietary flight operations software solutions into the aftermarket of the aerospace industry	ND	ND	ND	ND	ND	ND
12/03/18	Cerberus Capital Management	Navistar Defense, LLC	Provides tactical wheeled vehicle original equipment serving military, law enforcement, and government agencies worldwide	ND	ND	ND	ND	ND	ND
11/30/18	The Carlyle Group	StandardAero Aviation Holdings	Provides MRO services, auxiliary power units and components; airframe services including major alterations; FAA authorized avionics capabilities, engineering services, and aircraft design	5,000.0	ND	ND	ND	ND	ND
11/30/18	KiTron	BMSdivision of API Technologies Corp.	Provides design engineering and contract electronic manufacturing services for the commercial / industrial, energy, medical, military, and telecommunications markets	15.9	30.0	ND	ND	0.53x	ND
11/30/18	Hexcel Corp.	ARC Technologies, Inc.	Provides custom RF / EMI and microwave absorbing composite materials for military, aerospace and industrial applications	160.0	50.0	13.4	26.9%	3.20x	11.9x
11/30/18	General Dynamics European Land Systems (GELS)	FWW Fahrzeugwerk GmbH	Provides maintenance and repair of military wheeled and tracked vehicles as well as complex weapon systems for the German Army and other international customers	ND	ND	ND	ND	ND	ND
11/29/18	Electronic Connector Company of Illinois LLC	Aerospace and Defense Division of Magellan Distribution	Provides interconnect and MRO products to top tier U.S. defense contractors	ND	ND	ND	ND	ND	ND
11/29/18	AerSale, Inc.	Avborne Accessory Group, Inc.	Provides mid-life aircraft, engines, used serviceable material, and maintenance, repair, and overhaul services	21.5	ND	ND	ND	ND	ND
11/28/18	Talon Precision Optics, LLC	Assets of TrackingPoint Inc.	Provides Precision Guided Firearms (PGF), a shooting system which places into the optics all factors required to enable and set an accurate real-time firing solution	ND	ND	ND	ND	ND	ND
11/28/18	HEICO Corp.	Apex Microtechnology, Inc.	Provides design and manufacture of precision power analog monolithic, hybrid and open frame components for a certain wide range of aerospace, defense, industrial, medical & test applications	ND	ND	ND	ND	ND	ND
11/26/18	MTSSystems Corp.	E2M Technologies B.V.	Provides high-quality, durable, electrically-driven motion systems, serving primarily the training simulation markets	80.0	ND	ND	ND	ND	ND
11/19/18	Element Materials Technology Group	Cobham Technical Services Lightning Testing & Consultancy	Provides comprehensive lightning testing services and consultancy to the aerospace and defense sectors	ND	ND	ND	ND	ND	ND
11/14/18	BE Precision Systems & Space Company, Inc.	Thistle Design (MMC) Limited	Provides encoders, resolvers, and other positioning and measurement sensors for the defense and industrial markets, primarily in the UK	ND	18.0	ND	ND	ND	ND
11/14/18	Advantest Corp.	Astronics Corp.'s Semiconductor System Level Test Technology	Manufactures semiconductor test solutions	185.0	ND	ND	ND	ND	ND
11/13/18	Wencor Group, LLC	Silver Wings Aerospace, Inc.	Provides electric power and hydraulic component repair with unique capabilities in Used Serviceable Material ("USM")	ND	ND	ND	ND	ND	ND
11/12/18	SMTCorp.	MCAsssembly Holdings, Inc.	Provides the manufacture of electronic components serving the aerospace, industrial, telecommunications, networking, and medical markets	65.0	ND	ND	ND	ND	ND
11/09/18	Bristow Group	Columbia Helicopters	Provides commercial heavy-lift helicopter operations	560.0	281.0	117.0	41.6%	1.99x	4.8x

(1) S&P Capital IQ, company filings, and KippsDeSanto research

(2) KippsDeSanto & Co. served as financial advisor

ND = not disclosed

## Select Recent Aerospace / Defense M&A, cont.<sup>(1)</sup>

(\$ in millions)

Announce							EBITDA	EV / LTM		
Date	Buyer / Investor	Target	Target Description	EV	Revenue	EBITDA	Margin	Rev.	EBITDA	
11/09/18	CAE, Inc.	Bombardier, Inc.'s Business Aircraft Training Business	Provides flight training, technical training, training publications services	\$645.0	ND	ND	ND	ND	ND	ND
11/05/18	ACRElectronics, Inc.	Latitude Technologies Corp.	Designs and manufactures versatile aeronautical communications devices and a robust web-based aircraft tracking and flight data analytics platform	ND	ND	ND	ND	ND	ND	ND
11/05/18	IPG Photonics Corp.	Genesis Systems Group, LLC	Provides integration of robotic welding and automation solutions, with more than 300 blue-chip customers in the transportation, aerospace and industrial end market	115.0	100.0	ND	ND	1.15x	ND	ND
11/02/18	ADB Safegate	Ultra Airport Systems (AS)	Provides airport information technology systems and data analytics solutions to more than 100 airlines worldwide	28.5	ND	ND	ND	ND	ND	ND
11/01/18	Heico Corp.	Specialty Silicone Products, Inc.	Provides silicone materials for a variety of demanding applications, used in aerospace, defense, research, oil and gas, testing, pharmaceuticals and other markets	ND	ND	ND	ND	ND	ND	ND
11/01/18	ANSER Services, Inc.	Domain X Technologies	Provides program management, DoD acquisition, systems engineering, software engineering, and modeling & simulation support	ND	ND	ND	ND	ND	ND	ND
11/01/18	AMETEK, Inc.	Forza Silicon Corp.	Provides high-performance imaging sensors used in medical, defense, commercial and industrial applications	40.0	20.0	ND	ND	2.00x	ND	ND
10/30/18	J.F. Lehman & Co.	International Marine & Industrial Applicators / Craft and Technical Solutions	Provides critical vessel preservation services to the U.S. Navy; commercial maintenance, repair, and overhaul (MRO); and new construction markets	ND	ND	ND	ND	ND	ND	ND
10/29/18	Nanometrics, Inc.	4D Technology Corp.	Provides high-performance interferometric and inspection systems for variety of industries including aerospace, astronomy, defense, among others	40.0	15.0	ND	ND	2.67x	ND	ND
10/26/18	Textron, Inc.	Howe & Howe Technologies, Inc.	Provides extreme vehicle production and advanced robotics for extreme conditions and for a multitude of industries including defense	ND	ND	ND	ND	ND	ND	ND
10/23/18	Directional Aviation	SmCom International, Inc.	Provides initial and recurrent pilot training for jet, turboprop, and piston aircraft using FAA-qualified flight training devices and full-motion simulator	ND	ND	ND	ND	ND	ND	ND
10/22/18	QinetiQ Group plc	Inzpire Group Ltd.	Provides operational training and mission systems for military customers in the UK and internationally	30.5	17.3	2.6	15.0%	1.76x	11.7x	
10/18/18	PACEM Defense	AMTEC Less-Lethal Systems	Provides nonlethal devices used by law enforcement officers and correctional facilities	ND	ND	ND	ND	ND	ND	ND
10/17/18	Sonardyne International Ltd.	Chelsea Technologies Group Ltd.	Provides underwater acoustic products to both civilian and defense customers	ND	ND	ND	ND	ND	ND	ND
10/16/18	Luna innovations, Inc.	Micron Optics, Inc.	Provides innovative optical components and laser-based measurement technology for multiple industries including automotive and aerospace	ND	ND	ND	ND	ND	ND	ND
10/15/18	Fastener Distribution Holdings (Audax Capital)	FDQ Airspares	Provides aerospace consumables and supply chain management services to MRO and airline customers	ND	ND	ND	ND	ND	ND	ND
10/14/18	Harris Corp.	L3 Technologies, Inc.	Provides global ISR, communications and electronic systems for military, homeland security and commercial aviation customers	18,688.4	9,821.0	1,337.0	13.6%	1.90x	14.0x	
10/12/18	ETI Tech, LLC	Starwin Industries, Inc.	Provides components and assemblies for military aircraft, naval vessels and support equipment for the aerospace and defense industries	ND	ND	ND	ND	ND	ND	ND
10/10/18	American Distributors LLC	Microwave Components, Inc.	Distributor of specialized interconnect products and low loss cable/ cable assemblies, from antennas to board level components	ND	ND	ND	ND	ND	ND	ND
10/10/18	FLYHT Aerospace Solutions Ltd.	Assets of Panasonic Weather Solutions	Provides Iridium satellite communications systems, aircraft tracking and alerting, the FlightLink Iridium Satellite Data Unit, and Tropospheric Airborne Meteorological Data Reporting sensors	8.4	ND	ND	ND	ND	ND	ND
10/10/18	Celestica, Inc.	Impakt Holdings, LLC	Provides manufacturing solutions for leading OEMs in the semiconductor and Organic Light Emitting Diode display industries, as well as other markets requiring complex fabrication services	329.0	ND	ND	ND	ND	ND	ND
10/09/18	Transdigm Group, Inc.	Esterline Technologies Corp.	Provides the design, manufacture, and markets engineered products and systems primarily for aerospace and defense customers	4,064.0	2,028.0	276.7	14%	2.00x	14.7x	
10/09/18	AE Industrial Partners, LLC	The Atlas Group	Provides the manufacture of complex assemblies for commercial, military and business aircraft	ND	ND	ND	ND	ND	ND	ND
10/08/18	Ravn Air Group	Assets of Peninsula Airways, Inc.	Provides airline operating scheduled passenger service, as well as charter and medevac services throughout the state of Alaska	12.3	ND	ND	ND	ND	ND	ND
10/05/18	ONVOI Global Services	Aircraft Maintenance Business of Monarch Aviation	Provides Cessna certified maintenance company that has been located in DeFuniak Springs since 2011	ND	ND	ND	ND	ND	ND	ND

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ND = not disclosed



## Select Recent Government Technology Solutions M&A<sup>(1)</sup>

(\$ in millions)

Announce Date	Buyer / Investor	Target	Target Description	EV	Revenue	EBITDA	EBITDA Margin	EV / LTM Rev.	EBITDA
12/07/18	CSB, LLC	Artlin Consulting	Provides agile and responsive business solutions for defense and civilian customers, primarily focused on program and financial management	ND	ND	ND	ND	ND	ND
12/04/18	Huntington Ingalls Industries, Inc	G2, Inc.	Provides pioneering solutions to the most significant challenges affecting the nation's ability to collect, target, store, analyze and defend digital information	ND	ND	ND	ND	ND	ND
11/29/18	The Sentinel Company	E3 Federal Solutions	Provides program, acquisition, financial, facilities, and engineering management services to government and industry clients	ND	ND	ND	ND	ND	ND
11/26/18	EverWatch Corporation	Dynamic Engineering Solutions, Inc.	Provides cloud and network administration solutions to intelligence agencies	ND	ND	ND	ND	ND	ND
11/12/18	Novetta Solutions, LLC	Berico Technologies, LLC	Provides innovative, technology-enabled cloud engineering, data analytics, and IT modernization solutions to customers in the Intelligence Community	ND	ND	ND	ND	ND	ND
11/07/18	CALIBRE Systems, Inc.	SPEAR, Inc.	Provides IT solutions, cybersecurity, and data analytics services for business partners and federal agency clients	ND	ND	ND	ND	ND	ND
11/02/18	Analytic Services, Inc. (ANSER)	Domain X Technologies (DXT), LLC	Provides defense acquisition, project management, software development, systems engineering and technical support services available	ND	ND	ND	ND	ND	ND
10/31/18	Akoya Capital Partners, LLC	Converged Security Solutions, Inc.	Provides groundbreaking, managed services security solution spanning cyber and physical security to address the growing complexities in protecting critical infrastructure	ND	ND	ND	ND	ND	ND
10/30/18	EverWatch	Analysis, Computing, and Engineering Solutions, Inc. ("ACES")	Provides intelligence analysis, software development and system engineering to the intelligence community and the U.S. DoD	ND	ND	ND	ND	ND	ND
10/22/18	Applied Insight	Organizational Strategies, Inc.	Provides analytics, mission IT, and intelligence, surveillance, and reconnaissance services to government and commercial customers	ND	\$20.0	ND	ND	ND	ND
10/11/18	Cognosante, LLC	JLodge, LLC	Provides integrated solutions that improve the customer-care experience, using artificial intelligence, and driven speech analysis to analyze contact center interactions and find insights	ND	ND	ND	ND	ND	ND
10/11/18	DecisionPoint Corporation	CORTEK, Inc.	Provides systems engineering, software engineering, cyber support, and technical analysis to the Department of Defense, Department of State, and other government agencies	ND	ND	ND	ND	ND	ND
10/09/18	MAXIMUS, Inc.	Citizen Engagement Centers of General Dynamics Information Technology, Inc.	Provides and operates centers that handle government services inquiries and management	\$400.0	670.0	ND	ND	0.60x	ND
10/04/18	Bytecubed, LLC	InterKN	Provides proprietary technology platforms that connect enterprise buyers with innovative suppliers by dynamically surfacing available funding, technology needs, and data insights	ND	ND	ND	ND	ND	ND
10/02/18	Evolver, Inc.	eVigilant, Inc.	Provides, designs, engineers, implements, operates, and monitors state-of-the-art electronic security systems	ND	ND	ND	ND	ND	ND
10/01/18	Artech Information Systems, LLC	The Talent & Technology Solutions Business Unit of CDI Corp.	Provides IT and engineering talent sourcing services and technology solutions to clients across North America	ND	ND	ND	ND	ND	ND
09/28/18	An affiliate of H.I.G Capital	Iron Bow Technologies, LLC	Provides IT solutions dedicated to successfully transforming technology investments into business capabilities for government, commercial, and healthcare clients	ND	1,000.0	ND	ND	ND	ND
09/20/18	Systems One Holdings, LLC	TPGS, LLC	Provides customized mission-critical intelligence services and support with rapid response, proven talent, and exceptional service	ND	ND	ND	ND	ND	ND
09/20/18	NewSpring Holdings, LLC	The Sentinel Company	Provides strategic consulting, operational support, and technology services to partners in the homeland security, law enforcement, intelligence, defense, and federal health sectors	ND	ND	ND	ND	ND	ND
09/10/18	Science Applications International Corporation (SAIC)	Engility Holdings, Inc.	Provides a wide spectrum of integrated IT and professional services to various defense, intelligence, space, and civilian customers	2,457.4	1908.7	\$167.0	8.7%	1.29x	14.7x
09/04/18	ByteCubed, LLC	CHIEF	Provides brand, technology and communications solutions to government agencies, nonprofits, and corporations	ND	ND	ND	ND	ND	ND
09/04/18	AE Industrial Partners, LP	Gryphon Technologies, LC	Provides engineering services, defense systems and integration, naval architecture and marine engineering, and logistics solutions primarily to the U.S. Navy	ND	ND	ND	ND	ND	ND
08/29/18	SpeedCast International Limited	Globecomm Systems, Inc.	Provides satellite-based managed network solutions to government, communications service providers, commercial enterprises, and media and content broadcasters globally	135.0	ND	12.0	ND	ND	11.3x
08/27/18	MAG Aerospace Corp.	Ausley Associates, Inc.	Provides unmanned systems development, mission planning, concept of operations, and security solutions	ND	ND	ND	ND	ND	ND
08/20/18	Arlington Capital Partners	Tyto Athene, LLC	Provides a portfolio of IT solutions focused on networking, control and surveillance, secure communications, media analysis, and other advanced technologies	75.0	ND	ND	ND	ND	ND

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## About KippsDeSanto & Co.

KippsDeSanto is an investment banking firm focused on delivering M&A and financing expertise. Our solutions are focused on the sectors we know – aerospace / defense and government technology solutions. We are recognized for our depth of industry experience, knowledge of sector-specific transaction drivers, and long-standing relationships with industry participants.

We welcome the opportunity to have a more detailed discussion of developments in our focus industries. For more information, please contact us at (703) 442-1400.

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