



*DEFENSE & SECURITY SOLUTIONS*

**KRATOS®**  
FROM STRENGTH TO SUCCESS

Kratos Defense & Security Solutions, Inc.

Eric DeMarco  
President & CEO

November 8, 2018





***Kratos is the Recognized Affordable Alternative  
Prime System, Product and Technology  
Government Contractor***

***The Demonstrated Leader in Rapidly  
Developing, Demonstrating and Fielding High  
Technology, Affordable Systems***

***Highly Regarded in the Rapid Innovation,  
Research, Development Test & Evaluation  
(RDT&E) and Science and Technology  
Communities***

# Kratos Defense & Security Solutions Overview



## Unmanned Systems



- High performance jet powered unmanned aerial drone systems
  - Aerial drone target systems
  - Tactical combat drones
- Rail launched and parachute recovered (runway independent)
- Rapid mission turn around
- Low Cost / Affordable

## Satellite Communications



- Leader in providing secure management, delivery and distribution of data and information from space and land
- Used by more than 75% of the world's satellite operators and 85% of U.S.-based space missions
- C<sup>3</sup>, RFI detection and mitigation products

## Training Systems



- Offers systems & solutions across the entire training continuum
- Exhibit knowledge and skills to develop a lifecycle training program to support specific training needs
- Leading training systems & solutions provider for ground, air and sea platforms

## Microwave Electronics



- One of the largest international independent microwave solutions developers
- Products used in a variety of demanding environments, including airborne, ground and naval systems; missiles, radar, aircraft, guided munitions

## Ballistic Missile Defense Targets



## Laser Systems



## Patriot System



## THAAD System



## Hypersonic Systems



# Kratos – National Security Market Overview



- *After Years of Decline, Defense and Security Budgets are Increasing Globally*
- *A Recapitalization of Strategic Weapon Systems to Address Peer and Near Peer Threats is Underway for the U.S. and our Allies*
- *Priority Areas for Increased Budgets and Technology Advancement Include:*
  - *Unmanned Systems & Artificial Intelligence*
  - *Satellite Systems and the Space Segment*
  - *Electronic Warfare, Missile and Radar Systems*
  - *Missile Defense, Hypersonic Systems and Directed Energy*
  - *Lethality, Operational Readiness and Training*
  - *Science and Technology*
  - *Strategic Triad*

*Kratos is  
Well  
Positioned  
in Virtually  
All of These  
Priority  
Areas!*



# Industry Leader in High Performance Unmanned Aerial Target Drone Systems



BQM-177



BQM-167



MQM-178

- Kratos is the Leader in Development and Production of High Performance Unmanned Aerial Drone Target Systems
- Kratos' Target Drone Systems Represent the Most Advanced Aerial Threats of Our Adversaries and Operationally Test U.S. and Allies' Weapon Systems
- Kratos' High Performance Jet Powered Unmanned Aerial Drone Systems are The Highest Performance UAVs In the World
- Kratos' UASs are Rail Launched and Parachute Recovered, i.e., Runway Independent

# New Major Program Entering Production Expected to Drive Future Growth



U.S. Navy BQM-177  
LRIP Awarded June 2017

# Significant Growth Projected for Target Drone Market

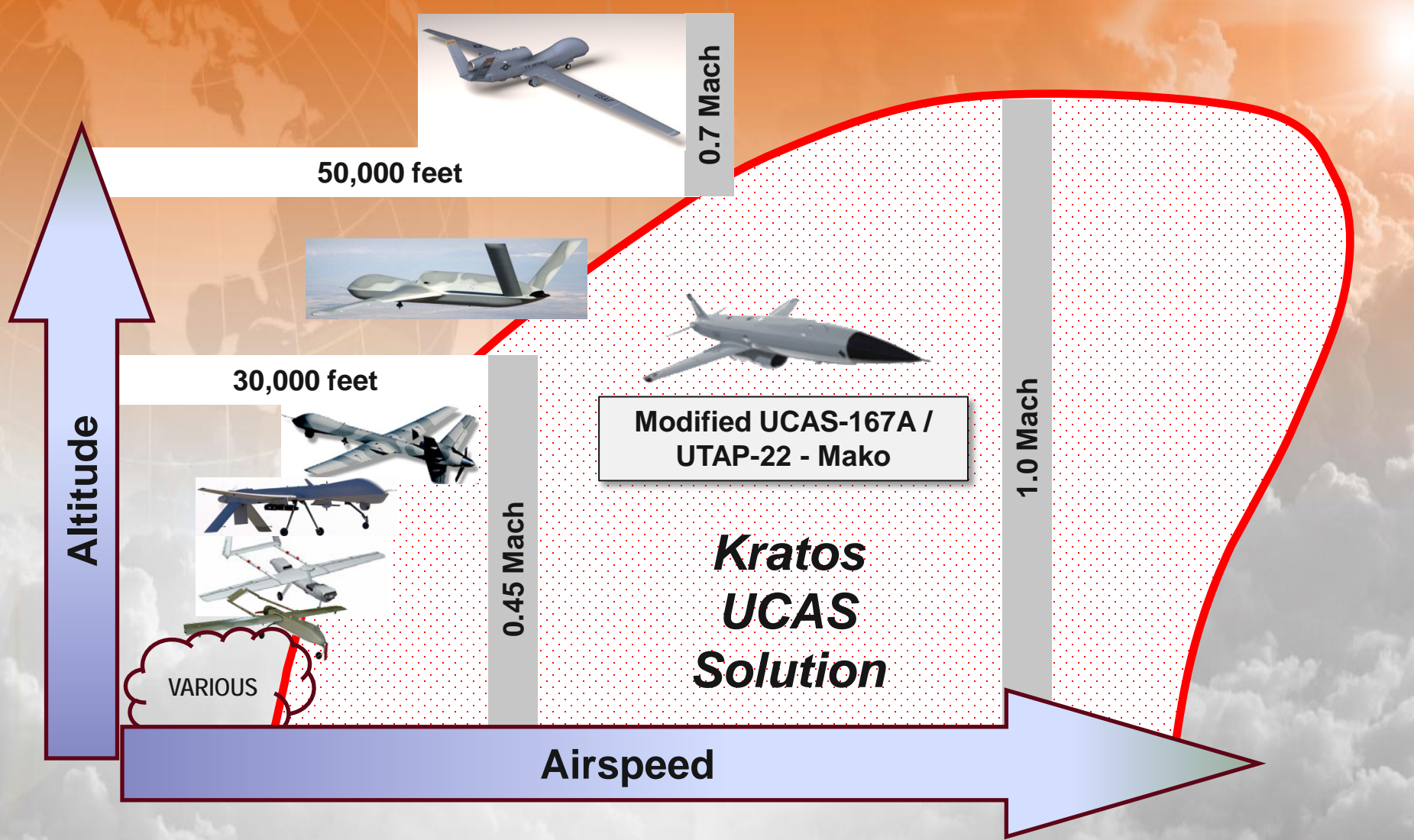


Market for target UAVs to reach \$6.2 billion by 2022;  
defense sector will see highest growth

By: Lisa Daigle, Assistant Managing Editor - ASDReports

SEATTLE. The global market for target drones -- or unmanned aerial vehicles (UAVs) used in the training of anti-aircraft crews -- is projected to grow from \$3.79 billion in 2016 to \$6.20 billion by 2022, at a combined annual growth rate (CAGR) of 8.55 percent during the forecast period, according to research from MarketsandMarkets.

# Kratos Addresses Gap In U.S. Unmanned Aerial System Capability

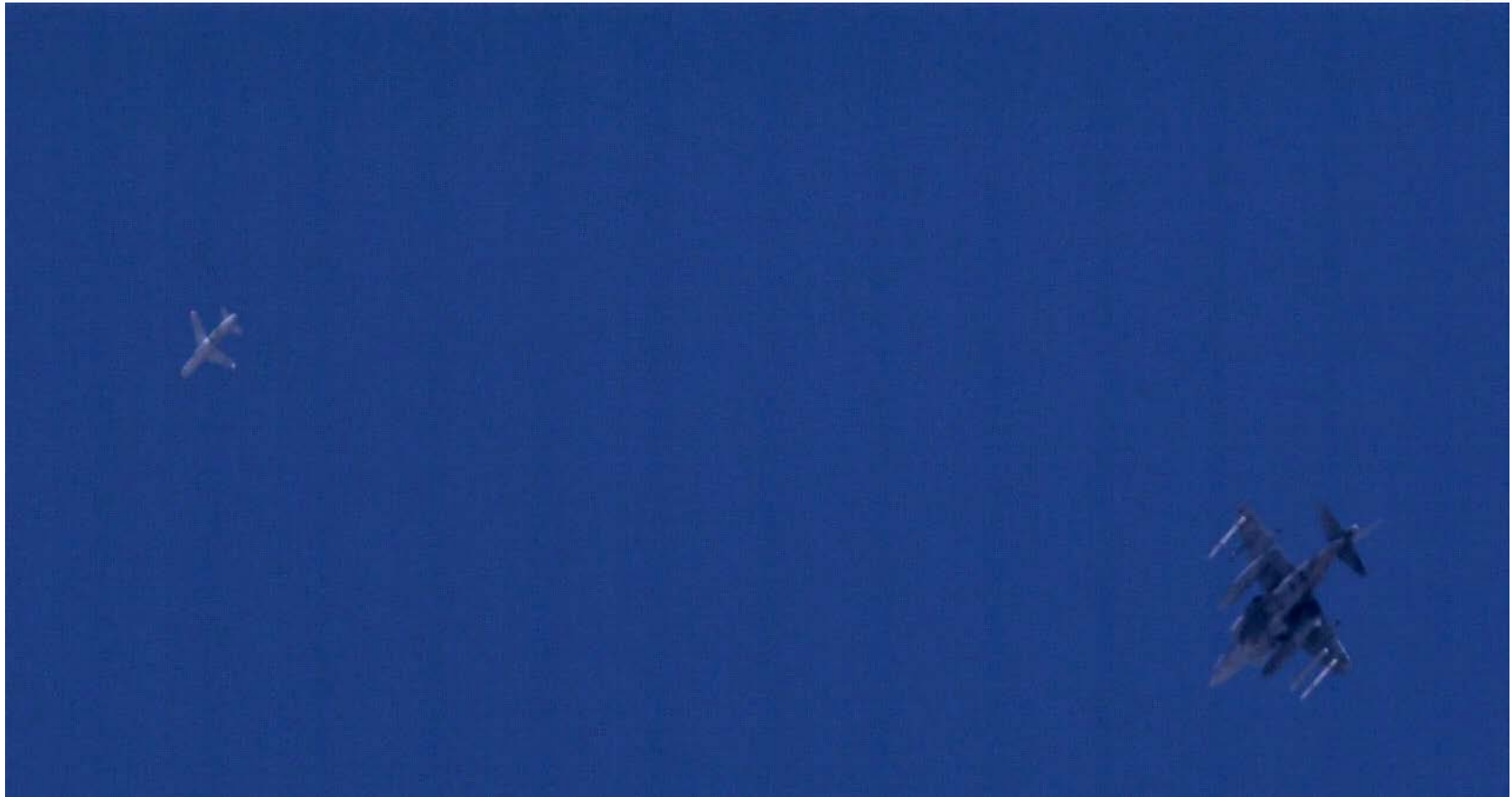




# Kratos – High Performance, Jet Powered Unmanned Combat Aerial System



# Kratos – UCAS “Loyal Wingman” to Manned Aircraft – Low Cost, High Performance Force Multiplier



**See YouTube Video – Search “UTAP-22” and enjoy**



# Kratos Wins Multiple Competitive UCAS Contract Awards



**Low Cost Attritable Strike Demonstration (LCASD) –  
Single Award (Development/Demonstration)  
Contract to Kratos – July 2016**



**Kratos UCAS –Fly in Major Military Exercise FY17 –  
Single Award (Development/Demonstration)  
Contract to Kratos – September 2016**



**Gremlins Air Launched / Air Recovered Unmanned  
Combat Aerial System (UCAS) – Phase III Contract  
Award Received March 2018**



# UCAS Opportunity, Recent Contract Wins, Provide Large Future Upside Growth Potential



LCASD



Mako



GREMLINS



Project F

Achievement of Production Status for Any of  
These Programs will be Additive to Kratos' Base  
Financial Forecast  
**Plus**  
Multiple Additional Other Opportunities in Process



# Significant Growth Projected for Target Drone Market



## Spending on Unmanned Systems Set to Grow

■ Spending on unmanned systems across all domains of warfare is expected to receive a major bump in the next fiscal year, a new report found.

The 2018 national defense strategy highlighted autonomy and robotics as top acquisition priorities for the Pentagon.

“Unmanned systems and robotics are key technology areas that enable the U.S. to counter the range of evolving threats posed on the modern battlefield,” research analyst David Klein said in a recent report released by the Association for Unmanned Vehicle Systems International.

The Defense Department funding request for unclassified programs related to these technologies increased 28 percent in 2019 to \$9.6 billion, Klein said in the study, “Unmanned Systems and Robotics in the FY 2019 Defense Budget.”

# Air Force To Test Target Drone Turned Low-Cost Unmanned Combat Air Vehicle

The USAF is interested to see what it can get out of a very budget-oriented UCAV.

BY TYLER ROGOWAY JULY 13, 2016





# Kratos – Tactical UAVs



## More Details Emerge On Kratos' Optionally Expendable Air Combat Drones

The USAF doesn't seem interested in fielding a high-end unmanned air combat vehicle, but they might be interested in fielding lots of cheaper, lower-end ones that they can even choose to throw away for certain missions.

[BY TYLER ROGOWAY](#) FEBRUARY 7, 2017



# Expendable US Combat Drones set to Dominate Future Air Combat

By Arthur Dominic Villasanta | May 31, 2017 12:14 PM EDT

0



Prototype XQ-222 in flight. (Photo : USAF)

A "cheap" U.S. Air Force stealth drone under development --the Low Cost Attritable Aircraft (LCAA) -- might be the breakthrough that leads to the demise of manned combat aircraft in favor of unmanned aerial killers.

The reason is LCAA is incredibly cheap by air force standards: only \$3 million apiece compared to the \$100 million for a single Lockheed Martin F-35 Lightning II stealth fighter and \$150 million for one Lockheed Martin F-22 Raptor.

The arithmetic is simple: \$100 million will buy the air force about 30 LCAAs. That means the air force can produce some 15,000 LCAAs for the cost it would take to buy the 168 F-35s and 195 F-22 Raptors currently in service, which cost a combined \$46 billion based on published figures.



# Kratos – Tactical UAVs



## The US Air Force Wants Cheap, Disposable Killer Drones

**DAVID AXE**

May 30 2017, 5:00am



Image: US Air Force

**The LCAA would be a fraction of the cost of current military drones and be able to go on more dangerous missions than manned aircraft.**

The future of air combat is small, cheap and disposable. That is, if a bunch of US Air Force scientists get their way.

In early May 2017, the [REDACTED]—the flying branch's Ohio-based science wing—released the first photo of a stealthy, weapons-capable robotic jet that just might become America's next major warplane.

The Low Cost Attritable Aircraft, or LCAA, has been in a development since July 2016. That's when [REDACTED] awarded Kratos, a San Diego drone-maker, a \$41-million contract to work alongside the labs to design and demonstrate what the government described as a "high-speed, long-range, low-cost, limited-life strike unmanned aerial system."

# Kratos – Tactical UAVs



## The Rise of Disposable Drones

As air-launched munitions get smarter, the Air Force is creating a new class of weapon—a combination of drones and missiles. But can they be advanced enough to work, yet cheap enough that it's okay to lose a few in battle?



Ryan Inzana  
By [Joe Pappalardo](#)  
May 30, 2017  
NASDAQ: KTOS



# Kratos – Tactical UAVs



## **Air Force to Arm F-15s, F-22s and F-35s with the Ultimate Weapon**

The Air Force and DARPA are now testing new hardware and software configured to enable 4th-Generation aircraft to command drones from the cockpit in the air, bringing new levels of autonomy, more attack options and a host of new reconnaissance advantages to air warfare.

# Kratos – Tactical UAVs



## The Air Force Valkyrie Drone, a Sidekick for Human-Piloted Planes, Will Fly This Year

The X-58A is planned as a “loyal wingman” to crewed combat aircraft.

By [Kyle Mizokami](#) Jul 12, 2018

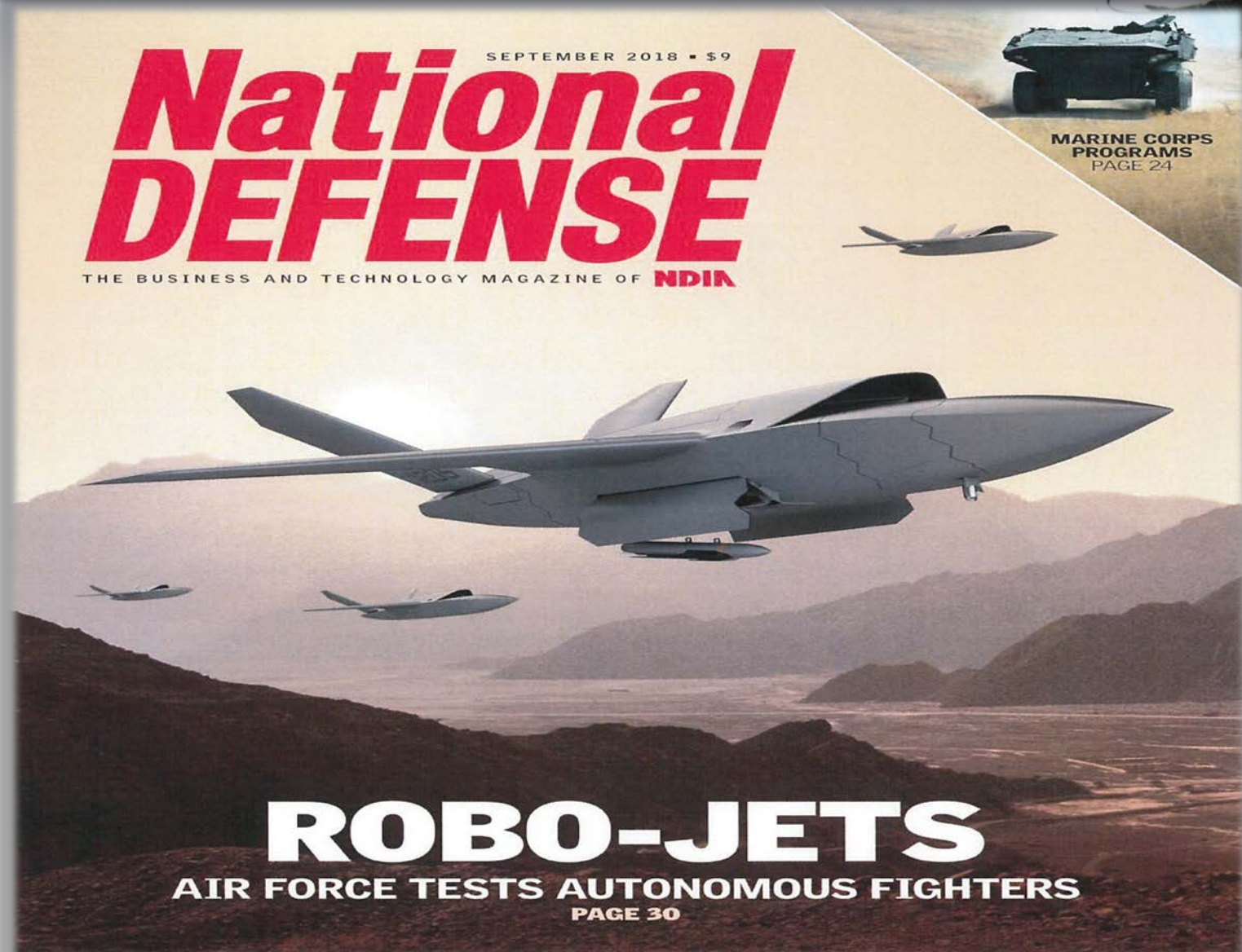


Later this year, the U.S. Air Force will test a new concept drone designed to act like a sidekick to combat planes with human pilots. The service sees the XQ-58A “Valkyrie,” or something very much like it, as a cost-effective way to augment the service’s current aircraft fleet.

Kratos, a builder of target drones, has been developing the XQ-58A. Under the Air Force’s “loyal wingman” concept, a drone wingman could act in concert with its crewed partner to shoot down enemy fighters, run interference for the crewed airplane as it carries out an attack, or suppress and destroy enemy air defenses before the crewed plane enters range.



# Kratos – Tactical UAVs





# Kratos – Tactical UAVs



## THE FUTURE OF AIR POWER

## NEW AGE OF AUTONOMOUS JET FIGHTERS ON HORIZON

BY STEW MAGNUSON

The scenario military thinkers propose would double the number of jet fighters in a typical battle formation from four to eight. But instead of the additional aircraft being identical to an F-35 joint strike fighter, or F-15E Strike Eagle, they are low-cost, unmanned jets.

One might carry extra air-to-air missiles. Another may only have a sensor suite to boost situational awareness for the pilots in the traditional aircraft.

Whatever their payload, the enemy has to contend with double the number of targets on their radars. They have multiple "dilemmas" in front of them, giving U.S. forces an asymmetric advantage.

Further, shooting down one of the U.S. aircraft or jamming its communications links would not completely degrade the battle formation.

This scenario is part of a larger concept that has emerged from the Defense Advanced Research Projects Agency called "mosaic warfare." Like a real mosaic that creates a picture out of smaller pieces, battlefield commanders can take disaggregated capabilities, sometimes in the form of low-cost, expendable robotic systems, to make life complicated for opponents.

"What does a platform have to do? It has to sense. It needs to communicate. It needs to defend itself. It needs to do data processing," Jim Galambos, a DARPA program manager in the strategic technology office, said in an agency podcast.

"What if we disaggregate? What if I took the sensing function and put it on an unmanned system so it can be farther away? It could be higher in the air to obtain a better angle of the battle. Or there could be multiple sensing platforms and angles, he said.

"Adversaries are pouring lots of money to go after single platforms that are high value. ... Do I go after one of the sensors? I might get one but not all. And by the way, the main

aircraft or ship is still going," Galambos said.

Like a mosaic, the whole idea is to bring many pieces together through automation and communications links. If a few pieces are lost, "you still get the picture," he said.

Or the pieces can be rearranged to tell a different story. Commanders can re-compose them and execute a different mission.

Mosaic warfare is an attempt to bring together unmanned systems and manned systems, he said. Such systems are linked today but aren't truly working together as a team.

Making this concept a reality in air warfare will require autonomous jets, a technology that is feasible now, experts said.

Kratos Defense, for example, has invested its own research-and-development dollars to adapt its jet aerial target system for other applications, said Steve Fendley, the company's senior vice president and president of its unmanned systems division. It then went around to various U.S. military labs such as DARPA, the Air Force Research Laboratory and Defense Innovation Unit-Experimental to make the case that its jet target system can fill the capability gaps that slower, lower altitude unmanned aerial vehicles can't.

"Because these systems have the fighter jet-type performance capability, they are also very well suited toward the contested environment that is such a challenge today for the military — both from the manned side and the unmanned side," he said in an interview.

The company is touting two aircraft for unmanned applications: the XQ-58A Valkyrie and the Unmanned Tactical Aerial Platform-22.

(UTAP-22).

Skip Stolz, director of strategic development for the autonomy, control and estimation group at BAE Systems, said his company has the software backbone that would allow autonomous jets to fly today — whether they are adapted from old fighters, or something built from a clean-sheet design.

"We have gone beyond where this is a technology problem," Stolz said.

Software products such as its Mission Effectiveness Augmentation System build on almost two decades of work, mostly on DARPA programs.

There are some missions that the software doesn't perform yet such as close-air support and proximity to friendly troops. But "that will be coming," he said.

The challenges to fielding robotic jets don't revolve around technology, but rather pilot trust and a lack of tactics development, he said.

"One of the main reasons we are talking about unmanned-manned teams is to take advantage of the strengths of the manned aircraft and to take advantage of the strengths of the unmanned aircraft," he said.

Humans are very good at critical thinking and intuitive decision-making. Machines can't hope to match a human doing that, or at least they won't for a long time, Stolz said.

Machines are good at processing large amounts of data rapidly to help the pilot in the manned aircraft come to correct decisions without him or her being inundated with information, he added.

Retired Air Force Gen. Hawk Carlisle, former commander of Air Combat Command, and now president and CEO of the National Defense Industrial Association, predicted that there would be some kind of autonomous wingmen for jet fighters early in the next decade.

"Clearly that's where we are headed. We have to be. We have to get more with less and one way to do that is to offload the stuff that can be offloaded to a machine," he said.

He envisions a scenario in the not too distant future when an F-15E Strike Eagle deploys with four drones: one doing reconnaissance, one doing electronic warfare, one with multi-

functions, and another a decoy.

If the enemy aims a radar at the decoy, it can autonomously maneuver in such a way that it causes confusion. If the EW drone senses a radar it can start jamming procedures. The recon drone gives the pilot better situational awareness as to what's happening. The backseat pilot in the F-15E can monitor the drones.

"The idea is to give the adversary things he can't handle," Carlisle said. If you don't know who is a shooter and who is a sensor, or if he can't tell the difference between an automated penetrating [drone] and a B-21 bomber, then you're giving him more problems.

Meanwhile, lone F-22 and F-35 pilots can keep tabs of the drones themselves because fifth-generation aircraft are now automatically doing the basic flying and sensing tasks. In the older aircraft Carlisle flew earlier in his career, these tasks were "all done in your noggin."

The fifth-gen jets manage all that "so you can raise the pilot to a higher level of achievement doing more and better things," he said.

The other advantage is for contested environments, which the military has said repeatedly will define the battle zones of the future.

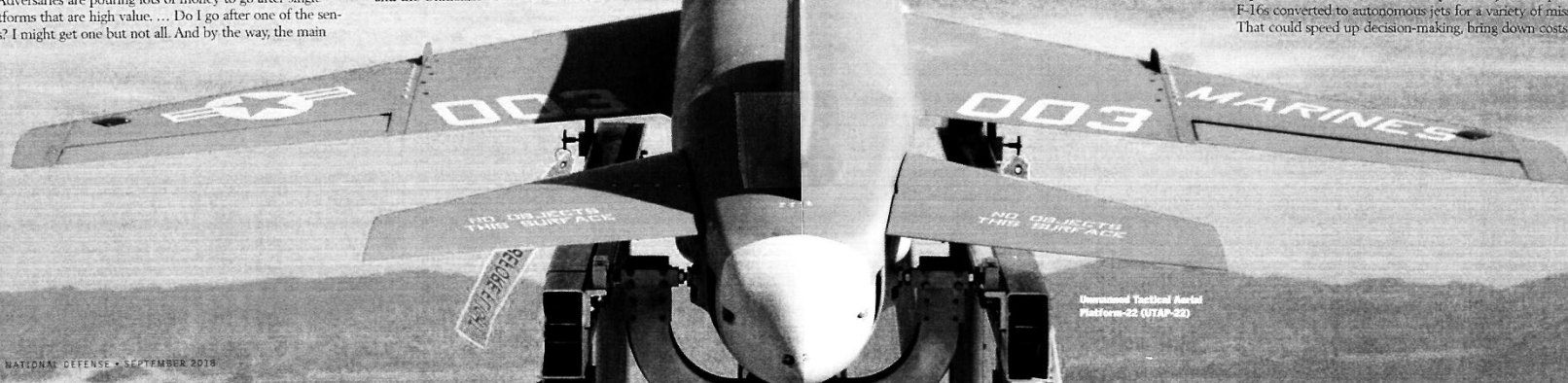
Opponents are going to try to jam communications, Carlisle said. They will not only go after aircraft, but space and cyber systems. Disaggregation creates resilience.

"What we have to do is be resilient and healing so we can continue the fight in a graceful degradation or a resilient mode," he said.

Fendley said Kratos' unmanned jets are ideal for contested environments because of their speed. Low-altitude unmanned systems are difficult to protect in a contested environment. The UTAP-22 flies at Mach 0.91 and the Valkyrie at Mach 0.72.

"The ability to apply these to the current mission sets that aren't being satisfied from an unmanned perspective goes way up," he said.

The Mitchell Institute for Aerospace Studies recently released a policy paper titled, "Manned-Unmanned Aircraft Teaming: Taking Combat Airpower to the Next Level." The study encouraged the Air Force to pursue a partnering concept where a manned F-35 could potentially team up with F-16s converted to autonomous jets for a variety of missions. That could speed up decision-making, bring down costs and



Unmanned Tactical Aerial Platform-22 (UTAP-22)



# Leader in Satellite Communications, Command, Control and RF Interference Mitigation



## Core Capabilities

- Group-based command and control systems
- Satellite monitoring systems
- Signal intelligence systems
- Radio Frequency Identification ("RFID") systems
- Identification of and Geosynchronous Orbit ("GEO") location of Rapid Fielding Initiative ("RFI") threats
- Telemetry processing systems
  - Specialized cyber products for govt. agency customers

## Attractive Growth Drivers

- U.S. Air Force space funding request is expected to increase
- Emerging space and cyber threats from adversaries
- Hundreds / thousands of new nano, cube and small satellites planned launches
- Drive to commercialization for cost, resiliency and capacity
- Increasing demand for bandwidth from Unmanned Aerial Vehicles ("UAVs"), intelligence, surveillance and reconnaissance

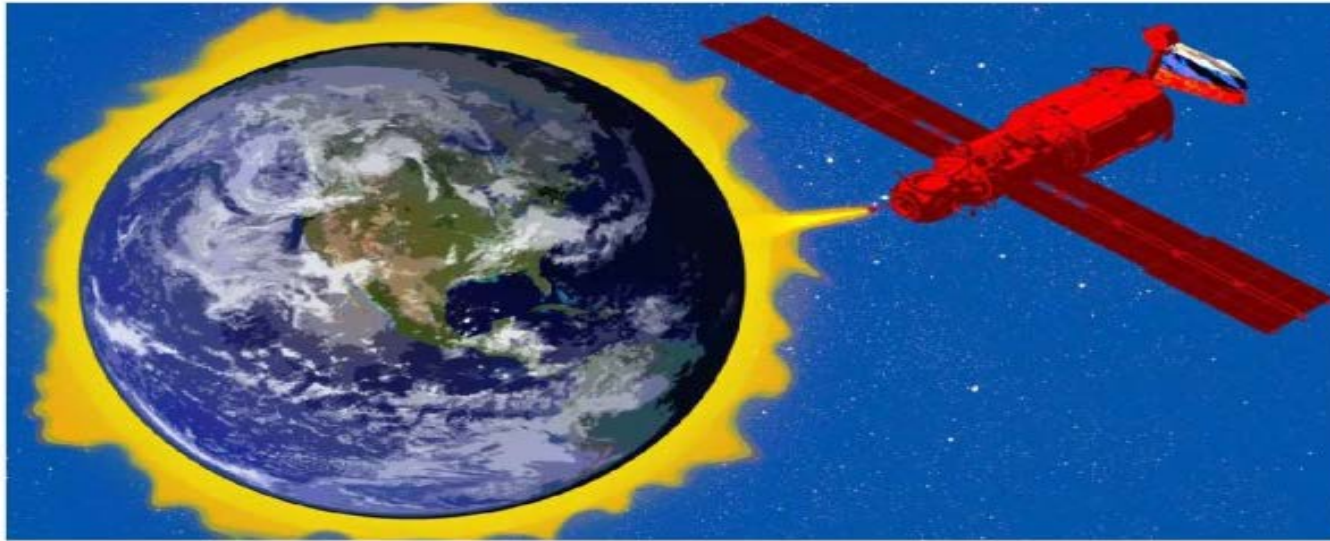
## Market Leading Solution

- Used by more than 75% of the largest satellite operators and 85% of U.S. space missions
- Market leading Commercial-off-the-shelf products ("COTS"), best-of-breed industry tools, custom developed modular software, and top notch engineering services
- An industry leader in RF interference identification, monitoring, GEO location and related cyber security solutions including Kratos owned and operated global surveillance network
- Enhanced protection through continuous monitoring, cloud security and operational and risk management



***Among the leaders in spot beam monitoring & signal acquisition***





DON'T SLEEP

## Russia's 'Killer Satellites' Re-Awaken

The trio of mysterious spacecraft were idle for at least a year. Now they're zooming toward foreign satellites again—and no one really knows why.

DAVID AXE

05.19.17 1:00 AM ET

A trio of [mysterious Russian government satellites](#) startled space experts when, shortly after blasting into low orbit between 2013 and 2015, they began dramatically changing their orbits, demonstrating a rare degree of maneuverability for small spacecraft.

## **How Russia and China Would Wage War Against America: Kill the Satellites**



They would attack American space assets.

Dave Majumdar [2]

Russia and China are actively pursuing new weapons and capabilities to counter America's dominance of space according a U.S. Intelligence Community assessment. Indeed, both nations are considering the development of weapons that could attack U.S. satellites and other space-based assets in orbit.

## U.S. Says Small Russian Satellite A Space Weapon

Posted By *Bill Gertz* On August 15, 2018 @ 5:00 am In National Security |

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Russia has deployed a suspicious satellite the United States says is part of Moscow's plans to attack orbiting satellites in a future conflict, a State Department official revealed in Geneva on Tuesday.



# Large Funding Increase for Space Provides Sustained Growth Opportunity



## Air Force Seeks Big Funding Boost for Space Capabilities

5/24/2017

By Jon Harper



Photo: Air Force

The Air Force wants a boost in funding for its space portfolio as potential adversaries advance their counter-space capabilities. The Air Force is requesting approximately \$7.75 billion for space investments. That is 20 percent or \$1.3 billion more than the 2017 budget request.

The U.S. military is dependent on space assets for a variety of key tasks such as satellite communications, missile warning, and positional, navigation and timing. But threats to those systems are growing, said David Hardy, acting deputy undersecretary of the Air Force for space.

“Based upon our intelligence assessments ... it is clear that both China and Russia have aggressive programs to both demonstrate and produce eventual operational capability to be able to both non-kinetically and kinetically attack our space assets across a broad spectrum,” he said May 24 during a meeting with reporters at the Pentagon.

SPACE WAR

## New Pentagon report names Russia, China as threats to US space capabilities

by Staff Writers  
Washington (Sputnik) Aug 10, 2018

A new space report by the Pentagon has named Russia and China as key threats to US space capabilities, according to a document released on Thursday.

"The United States faces rapidly growing threats to our space capabilities. China and Russia, our strategic competitors, are explicitly pursuing space warfighting capabilities to neutralize US space capabilities during a time of conflict," the report said. "Other potential adversaries are also pursuing counter-space capabilities such as jamming, dazzling, and cyber-attacks."





# Industry Leader in Aviation Maintenance Training Systems



CH-47 Avionics Trainer



UH-60 Remove/Replace Trainer



CH-53K Maintenance Training System



UH-60 Avionics Trainer

## UH-60, CH-47 & CH-53 Full Fidelity and Part Task Maintenance Trainers

UH-60 Landing Gear &  
Braking System Trainer



Aviation Basic Electronics  
Trainer



UH-60 Rotor Brake Trainer



UH-60 Avionic Wiring System Trainer



UH-60 Stabilator Trainer



# Recent Major Training Program Wins



**MCAT**  
MARINE COMMON  
AIRCREW TRAINING

*"Recent Wins Provide  
Long Term Growth  
Platforms"*

## KC-46



# Kratos – Microwave Electronics



- One of the Largest Independent Microwave Businesses in the Industry
- Microwave Sub Systems and Components
- Key Customers Include Israeli Aerospace Industries (IAI), Rafael, SAAB, India, BAE, Etc.
- Supports a Significant Number of Israeli Radar and Missile Systems:
  - Iron Dome
  - Barak
  - Arrow
  - Sling of David
  - Spyder
  - Etc.
- Electronic Warfare Suite of Swedish Gripen Fighter
- Working on Various Indian Missile, Radar and Other Systems
- F-15 Electronic Warfare System
- F-16 Electronic Warfare System



Iron Dome



Barak



Arrow III



Gripen Fighter



Sling of David



F-15

# Kratos – Missile Defense Systems



## NUMEROUS BMD PROGRAMS & SYSTEMS SUPPORTED

- Missile Defense Targets
- Cruise Missile Targets
- Hypersonic Systems
- Patriot
- THAAD
- Space Based Infrared System (SBIRS-High)
- Air and Missile Defense Radar (AMDR)
- Aegis BMD and Combat System
- Arrow
- Barak
- Iron Dome
- Sling of David
- Etc.



Patriot



THAAD



BMD Target



Aegis &  
AMDR



# Kratos - Space & Missile Defense Systems



*Focused on providing Rapid Innovation and Low Cost BMD Target and Hypersonic Test Solutions.*

*Affordable*

*Responsive*

*Innovative*

“...upwards of 75% of MDA’s target OPTEMPO using less than 10% of MDA’s TC budget line...”



# Kratos - Space & Missile Defense Systems



## Target & Hypersonic Test Vehicles

Hypersonic Program	Vehicle Illustration	Navy Target Nomenclature	MDA Target Nomenclature	Vehicle Motor Configuration		
FSST HyShot HIFIRE		ARAV-A	SRBM T4-A	Orion	MK70 Terrier	
HyCause		ARAV-C	SRBM T4-C	Castor I	MK11 Talos	
		ARAV-G	SRBM T4-G	Oriole TVC	MK11 Talos	
		ARAV-B	SRBM T4-B	Oriole	MK70 Terrier	
HIFIRE SCiFIRE		ARAV TTO-E	MRBM T4-E	Oriole	MK70 Terrier	MK70 Terrier
		ARAV TTO-B		Oriole	MK70 Terrier	MK70 Terrier
		ARAV-CZ			Castor I	MK11 Talos
		ARAV-M		Oriole	Castor I	MK11 Talos

UNCLASSIFIED



## US warship shoots down missile in space in spectacular interceptor test

By James Rogers, Lucas Tomlinson Published October 26, 2018

A U.S. Navy warship has shot down a medium-range ballistic missile in space in the latest successful test of the military's advanced interceptor technology. Sailors aboard the USS John Finn intercepted the missile target using a Standard Missile-3 (SM-3) Block IIA missile during the test off the west coast of Hawaii, the Pentagon's Missile Defense Agency said Friday.

The missile is designed to shoot down enemy intercontinental ballistic missiles should they ever be fired at the U.S. SM-3 interceptors destroy incoming ballistic missiles in space using nothing more than "sheer impact," like hitting a 10-ton truck traveling at 600 mph, according to defense company Raytheon, who makes the interceptor missile for the joint U.S.-Japanese project. The interceptor operates as part of the Aegis Ballistic Missile Defense system.



Launch of the target missile from the Pacific Missile Range Facility at Kauai, Hawaii  
(U.S. Department of Defense Missile Defense Agency)

The missile intercepted a target missile in space

The target missile was launched Friday from the Pacific Missile Range Facility at Kauai, Hawaii. The warship detected and tracked the target with its onboard radar using the Aegis system. "Upon acquiring and tracking the target, the ship launched an SM-3 Block IIA guided missile which intercepted the target," explained the Missile Defense Agency, in a [statement](#).

The first successful test of the interceptor took place in February 2017 when sailors aboard the USS John Paul Jones took out a missile using an SM-3 Block IIA guided missile. However, two subsequent tests failed, the last coming in late January 2018.

Friday's second successful test was applauded by MDA Director Lt. Gen. Sam Greaves. "This was a superb accomplishment and key milestone for the SM-3 Block IIA return to flight," he said, in a statement. "My congratulations to the entire team, including our sailors, industry partners, and allies who helped achieve this milestone." Based on observations and initial data review, the test met its objectives, according to the Agency. Program officials will continue to evaluate the system's performance, it said.



# Kratos – Positioned For Success



## SUCCESSFULLY EXECUTING OUR STRATEGY

- 2010 – 2012 → Executed a Series of Technology, Product and Intellectual Property Company Acquisitions Focused on a Specific Products & Technology Strategy
- 2013 – 2017 → Successfully Integrated the Acquisitions, While Investing in Unmanned Aerial Systems, Satellite Communications, Microwave Electronics and Training Systems; Pursued and Won Multiple New Programs with More Expected
- 2017 → Recapitalized the Company: Investments Winding Down, Production Beginning and Increasing on Multiple Programs
- 2018 → Divested Non Core Business, Reduced Leverage, Increased Focus on Core Businesses, Multiple New Programs Awarded

**Kratos is Positioned for Expected Significant Growth In:**

**Revenue**

**Gross Margins**

**Operating Income**

**EBITDA**

**Cash Flow**

**EPS**

# Kratos – Third Quarter 2018 Execution Highlights

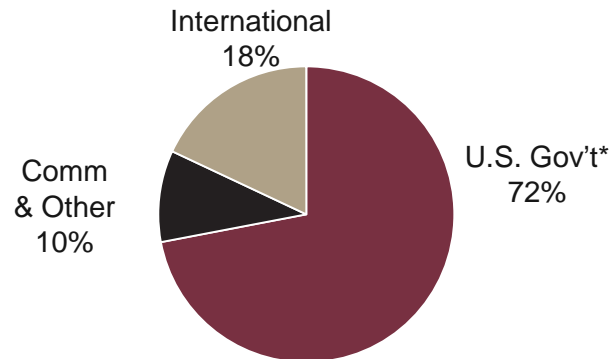


- KGS Organic Growth ~9.2%
- Q318 Year over Year Adjusted EBITDA Growth ~47.8%
- Q318 Operating Income \$10.1 Million, up from \$0.1 Million Year-Over Year
- LTM Adjusted EBITDA of \$58.4 Million
- Q318 Book-To-Bill Ratio 1.4 to 1.0, LTM Book-to-Bill Ratio 1.0
- Bid & Proposal Pipeline Increase of \$200 Million – Up to \$6.7 Billion

# Kratos – Recent Financial Highlights – Q318

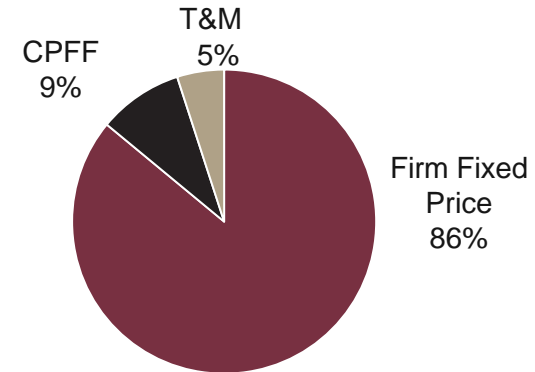


**Nine Months ended 9/30/18  
Revenue by Customer**

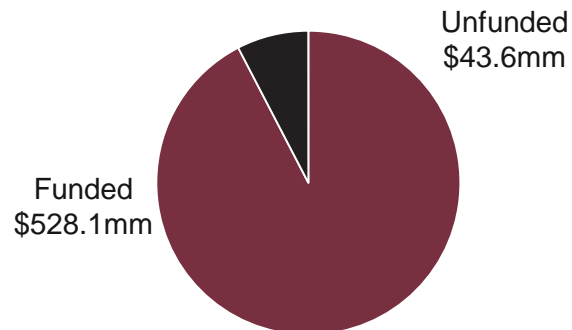


\*Includes Foreign Military Sales (FMS)

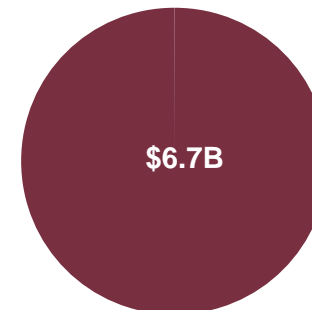
**Nine Months ended 9/30/18  
Contract Mix**



**Backlog ended 9/30/18**

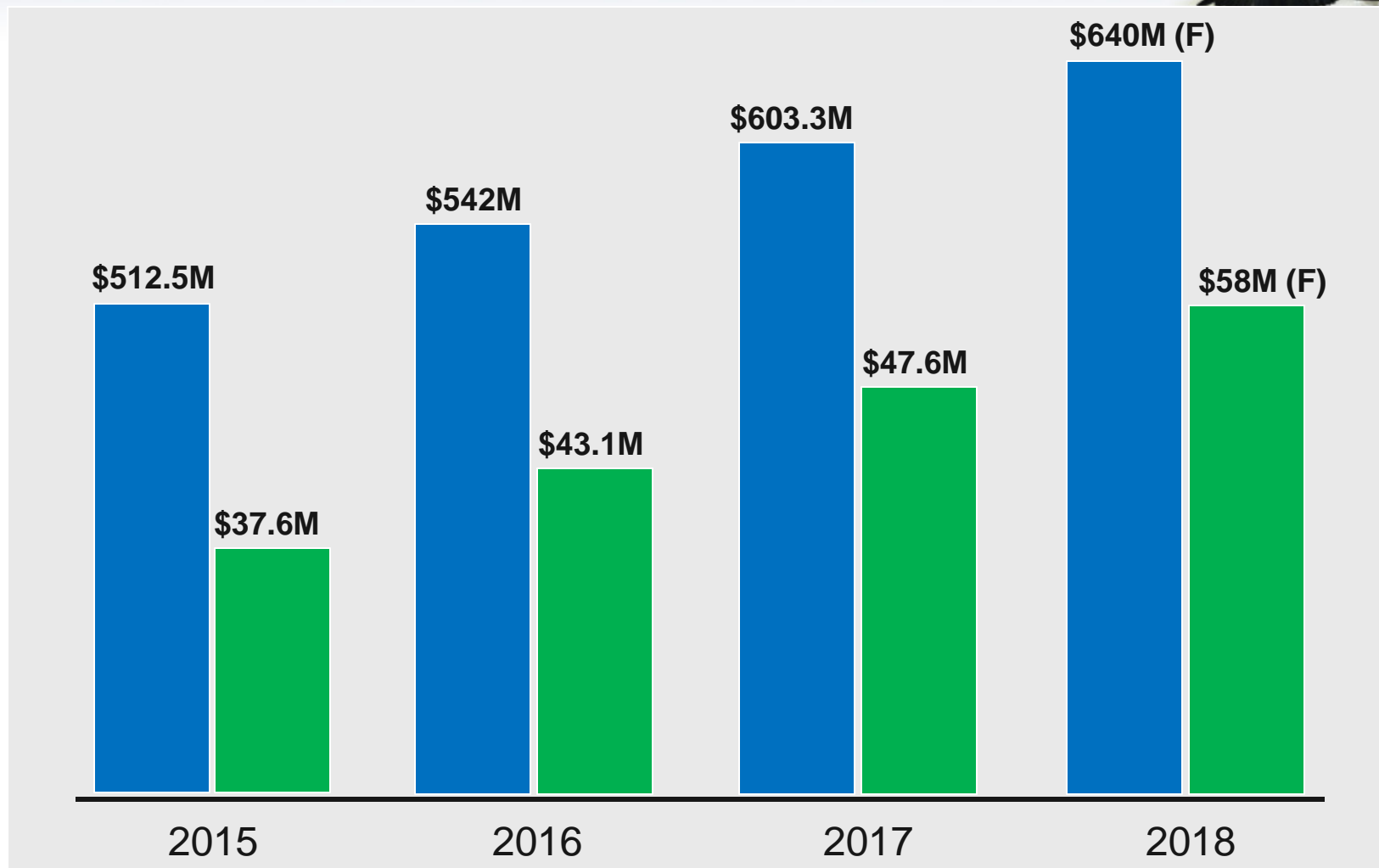
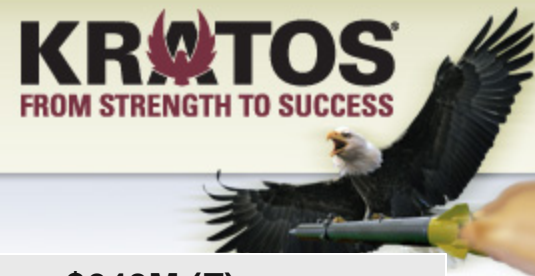


**Bid & Proposal Pipeline ended 9/30/18**





# Kratos – Organic Growth Trajectory<sup>(1)</sup>



Revenue

EBITDA

(1) Recast to Present PSS as Discontinued Operations

(F) – Reflects Mid-Point of Company Guidance 2018

# Kratos – Recent Financial Highlights – Q318



	<u>Q318</u>
Gross Debt	\$294.0M
Cash	\$187.2M
Net Debt	\$106.8M
LTM Adjusted EBITDA	\$58.4M
Net Leverage	~1.83X

Kratos' Balance Sheet Positioned to Support Expected Future Growth From Multiple New Program Awards

Net Leverage Expected to Continue to Decrease as Revenue, Adjusted EBITDA and Free Cash Flow Increase Going Forward



## Improved Financial Performance

- Increase Gross Margins with Increasing Production
- Increase Adjusted EBITDA with Leverage on Fixed G&A and Overhead Costs
- Increased Overall Profitability and FCF as Investments Wind Down and New Production Programs Begin/Ramp
- Continue to Reduce Net Debt with Operating Cash Flows, Increased Profitability and Adjusted EBITDA – Targeting 10%+ Margins



# Kratos – Long Term Growth Drivers



## Programs/Systems Under Production Contract

USAF AFSAT BQM-167 Target Drone (E)  
USN SSAT BQM-177 Target Drone (N)  
USA HSAT+ BQM-167M Target Drone (N)  
Confidential XXXX (N)  
USA Firejet MQM-178 Target Drone (E)  
International BQM-167 Target Drone (E)  
International BQM-177 Target Drone (N)  
International MQM-178 Target Drone (E)  
Next Generation Target Drone (N)  
Royal Saudi Navy FMS Training Program (N)  
USM MCAT Helicopter Training System (N)  
KC-46 Aerial Refueler Training System (N)  
SAAB Gripen Electronic Warfare (N)  
Barak 8 Israel SAM (N)  
Global Space Spectrum Monitoring Network (E)  
New Program (N)                      Existing Program (E)

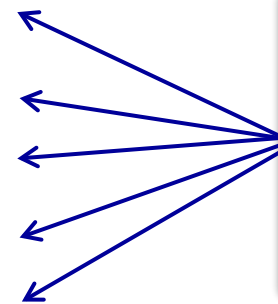
*Representative  
Under Contract  
Long Term  
Programs Provide  
Confidence for  
Significant Future  
Growth Revenue,  
Profit, Cash Flow*

# Kratos – Long Term Growth Drivers



## Representative Program/Systems Under Development Contract

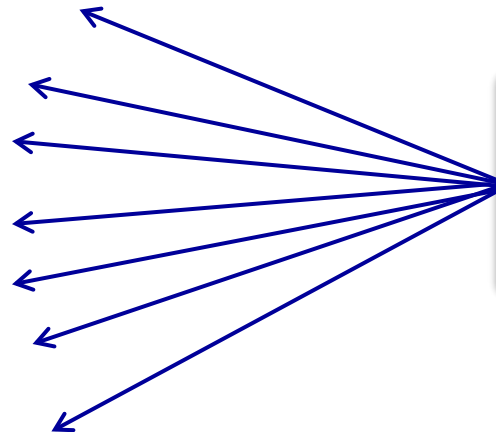
XQ-58 Valkyrie	UCAS/Tactical
Gremlins	UCAS/Tactical
Mako	UCAS/Tactical
Program F	UCAS/Tactical
Program Thanatos	



*These Tactical Systems, Either Individually or Combined are Expected to Drive Additional Significant Organic Growth Once Production Status is Achieved*

## New Programs/Systems in Pursuit

Project A UCAS/Tactical  
Project Spartan  
Projects A & Z  
Hypersonic System A  
Hypersonic System B  
MD Opportunity SS  
MD Opportunity TSR



*Each of These Program/System Opportunities are Expected to be Under Contract in Next ~18 Months*



*The Differentiated Affordable Systems  
Provider*

*The Leader in High Performance Unmanned  
Aerial Drone Systems*

*Positioned for Significant and Sustained  
Organic Growth with Multiple New Programs  
Beginning or Increasing Long Term  
Production*