



# Kratos Defense & Security Solutions

## Investor Brief

May 2021

# Technology Innovation for National Security

## Technology Innovation for National Security

Kratos specializes in areas where technology advances can have a force multiplier effect.



# Kratos Overview

***Product Focused Technology Company in the National Security Industry, Key Intellectual Property Ownership***

***Commercial, Entrepreneurial, and Venture Capital Culture and Backed Business Model and Approaches***

***Industry Leading Positions in Our Core Market Areas:***

***Space & Satellite***

***Drones and Artificial intelligence***

***Microwave Electronics***

## **Kratos Differentiators**

***At Kratos - Affordability is a Technology***

***Demonstrated Rapid Development and  
Fielding of Products and Systems***

***Recognized “Go To” Alternative, Affordable  
Product and System Provider***

***Utilize and Integrate Proven “Leading Edge  
Technology” vs Unproven “Bleeding Edge  
Technology” = Reduced Technical,  
Schedule and Financial Risk***

# Macro Industry Overview & Kratos

- *After ~25 Years of Addressing Terrorist Threats and Asymmetric Warfare, a Recapitalization of Strategic Weapon Systems to Address Peer/Near Peer Threats is Underway: Drones & AI, Space & Satellites, Microwave Electronics, Missile Defense & Hypersonic, Strategic Systems*
- *Kratos has Made Significant Internally Funded Investments to Achieve its Market Leading Positions and Strong Forecasted Organic Growth Profile, with Investments Expected to Continue in 2021 to Support Multiple New Program Awards*
- *Organic Growth Forecast to Increase and Accelerate in 2022 as New and Development Programs Expected to Transition to Production*

# Kratos – Primary Business Areas

<b>Target Drones</b>		<b>Missile Defense Systems</b>	
<b>Tactical Drones</b>		<b>Hypersonic Systems</b>	
<b>Space &amp; Satellite Communications</b>		<b>Strategic Deterrence</b>	
<b>Microwave Electronics</b>		<b>Next Generation Engines for Drones/ Missiles</b>	



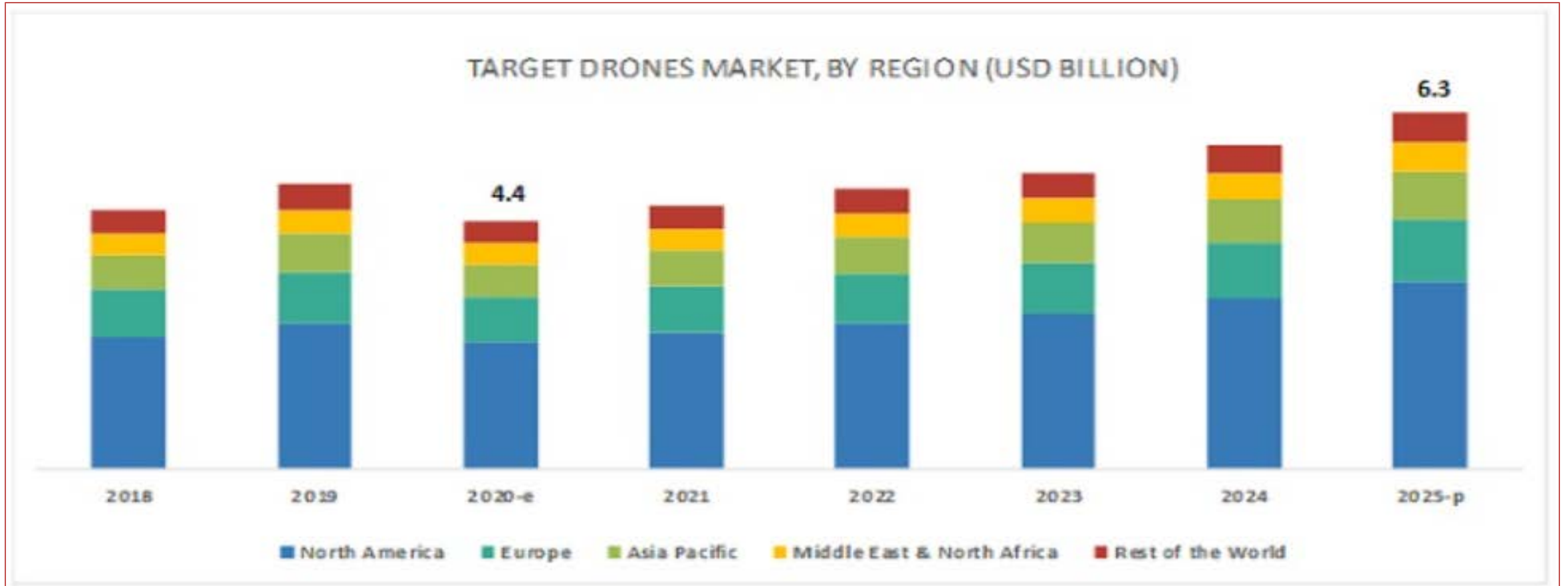
# Unmanned Aerial Target Drone Systems



- Kratos is the leading provider of the Highest Performance, Threat Representative Target Drones in the world
- Kratos Drones exercise U.S. and our Allies' Radars and Weapon Systems – Kratos Target Drones are “shot down” and replaced
- Growth is being driven by the Recapitalization of Strategic Weapon Systems and the need to Test and Evaluate these systems

# Kratos - Target Drones

Target Drones Market worth \$6.3 billion by 2025, at a CAGR of 7.6%



Source: MarketsandMarkets™ Inc. June 2020



# Unmanned Aerial Tactical Drone Systems



Valkyrie



Gremlin



Mako



Airwolf

- Kratos is the leading provider of affordable, high performance, tactical jet powered drone UASs in the industry – four drone variants in this Class flying today
- Multiple major DoD Programs will require hundreds/thousands of affordable/attritable drones in this Class: Skyborg, ABMS, Golden Horde, ACE, IBCS, etc.
- Low Cost (~\$400K - ~\$3M) Leading Technology Force Multipliers
- Overwhelm the adversary with quantities while protecting the warfighter
- Kratos drones are the highest performance UAVs in the world
- Russian and Chinese Threats, A2/AD environments driving funding and growth





# Skyborg Could Develop Multiple Drones For Many Missions

The Air Force is "driving toward" 2023 for initial operating capability for Skyborg, says AFRL Director Brig. Gen. Heather Pringle.



WASHINGTON: The high-priority [Skyborg program](#) to develop low-cost, autonomous drones able to team with piloted aircraft could reach initial operating capability by 2023, says AFRL

Source: Breaking Defense February 4, 2021

*The Valkyrie  
Flying in  
Formation  
with an F-22  
& F-35*



*DARPA  
Gremlins*





**Valkyrie Weapons Bay Operation in Flight**

## The Air Force's first Skyborg autonomous drone prototype made its first flight

WASHINGTON — The Air Force carried out the first flight test of a [“Skyborg” drone](#) last month with an Kratos UTAP-22 Mako equipped with a bespoke autonomy system, moving the service one step closer to fielding an uncrewed “loyal wingman” for human pilots.



The Skyborg autonomy core system launches aboard a Kratos UTAP-22 tactical unmanned vehicle at Tyndall AFB, Florida on April 29. (U.S. Air Force)



# THE WARZONE

## KC-135 Tanker Tested With Loyal Wingman Drone

The 60-year-old Stratotanker will take on networking roles and get new survivability-enhancing pods that will keep it relevant for decades to come.

*New systems installed in the U.S. Air Force's [KC-135 Stratotanker](#) will allow the veteran aerial refueling tanker to serve as a communications node for other platforms, including armed drones, with plans to add underwing pods that will further expand this capability and boost its own defenses. In recent trials, the aircraft received data from the [Kratos Unmanned Tactical Aerial Platform-22, or UTAP-22](#), a low-cost [loyal wingman](#) drone ...*





# Kratos

## “We Ain’t Them!”

- Kratos’ expertise is in affordable composite jet unmanned drone aircraft and systems
- We don’t build large, manned, military and commercial aircraft
- Kratos’ production facilities, lines, methods are optimized for the aircraft we produce, i.e., Low Cost, High Performance
- We have multiple aircraft types in rate production today in quantities of 30-50+ each per year
- Our production facilities and lines do not “mirror” the Primes’ production facilities and lines; this is by design. We don’t produce \$100M aircraft or even \$10M (a piece) aircraft, ours are significantly less costly and our methods are optimized for the system/performance/price we are delivering
- Interestingly, if you look at the major primes and their aircraft build facilities; for low cost, and/or rapid development systems, they tend to use small boutique divisions of their companies or partners who are optimized accordingly. They do not use their major production facilities
- A prime element of the key to our success across our Targets and Tactical systems is our ability to truly design to cost both in development and production
- Our Company size is a major discriminator here in our ability to take this Low Cost approach and remain profitable/viable as a business. Affordability is a Technology at Kratos
- The major primes are not “configured” to do business at this systems’ cost and scale

# Space & Satellite Communications



WGS



SBIR



OPIR



TITAN

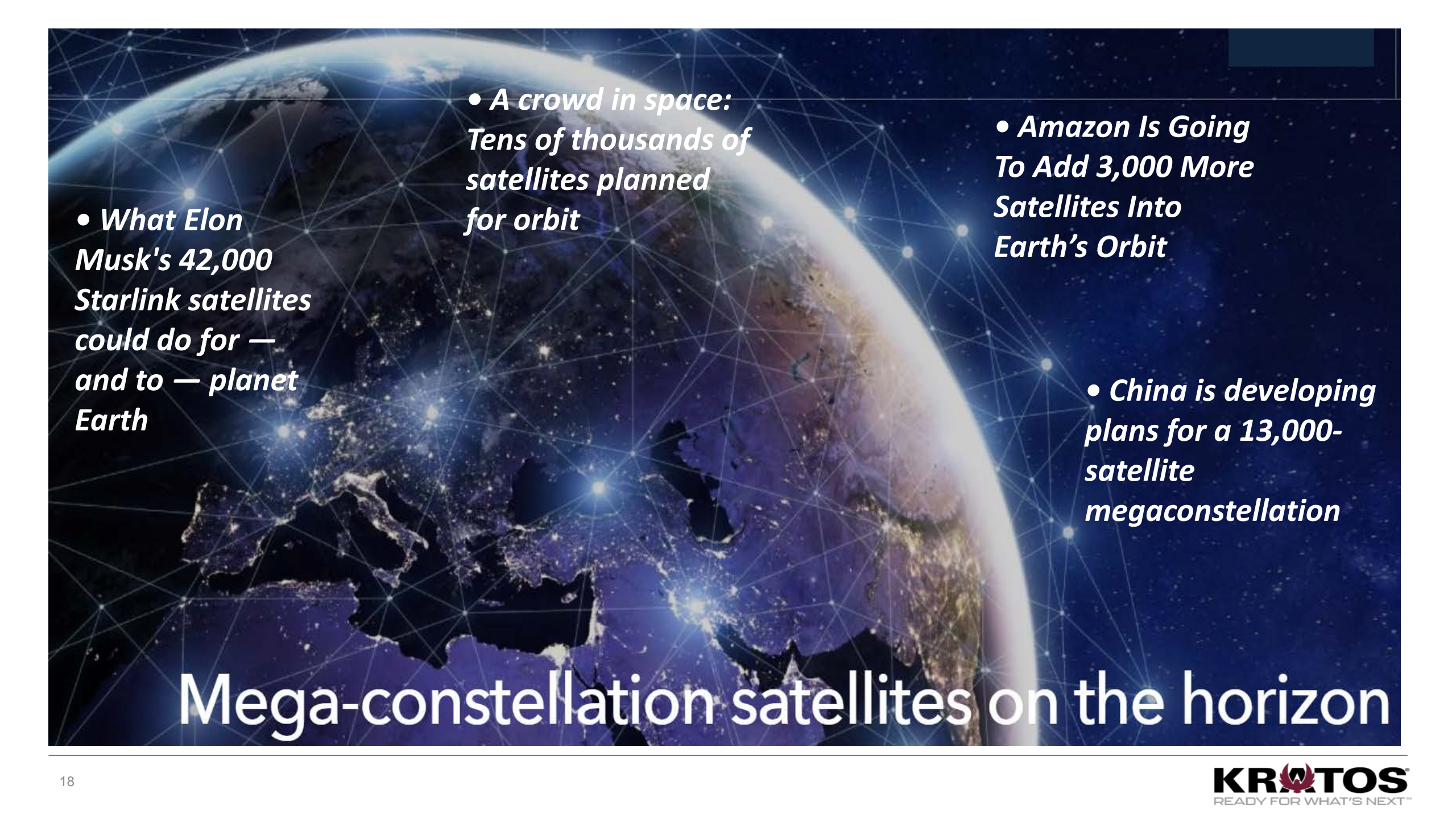


AEHF



HBTSS

- Kratos is the leading provider of Satellite Command & Control (C<sup>2</sup>) and Telemetry, Tracking & Control (TT&C) Ground Systems in the world and a leader in the Transition to Open Architecture, Software Defined, and Digital to IP Data Conversion Systems. Kratos supports ~80% of Space Missions
- Disaggregation of Ground Segment Procurement from Space System Procurement opening large new market opportunities for Kratos
- Kratos' Global owned and operated RF Monitoring Network is one of our most valuable and unique assets – Increasing # of satellites driving Space Monitoring Demand
- Space and Satellite Communications are one of the fastest growing and well funded DoD areas due to Russian and Chinese threats, Hypersonic System Tracking and Targeting, etc.
- Thousands of LEO and MEO satellites planned for the future, including to track Hypersonic Threats (HBTSS) Program and Sensor to Shooter Data Processing – Tactical Interface Tracking Application Node (TITAN) Program
- Large, New 5G and Ground Station as a Service (GSaaS) opportunity just beginning

A background image showing a view of Earth from space, with a network of white lines connecting numerous small white dots representing satellites. The Earth's horizon is visible on the right side, and the continents of Europe and Africa are partially visible.

- ***What Elon Musk's 42,000 Starlink satellites could do for — and to — planet Earth***

- ***A crowd in space: Tens of thousands of satellites planned for orbit***

- ***Amazon Is Going To Add 3,000 More Satellites Into Earth's Orbit***

- ***China is developing plans for a 13,000-satellite megaconstellation***

# Mega-constellation satellites on the horizon



# Kratos Unveils New Platform that Turns Satellites, Antennas into Software-Defined Systems

**Kratos Defense & Security Solutions** has rolled out a new software platform, "OpenSpace," composed of virtual products that enable satellite operators and Ground-as-a-Service (GSaaS) providers to design their own fully software-defined, dynamic ground systems, the company announced October 20.

Source: Satellite Today October 21, 2020



# Microwave Electronics



Missile Defense



Radars



Electronic Warfare



ISR



Satellite Programs

- Kratos is a leading provider of Microwave Electronic Sub Systems and components in support of major C5ISR programs
- Global microwave electronics industry is seeing increased funding and rapid growth due to Recapitalization of Strategic Weapon systems to address peer/near peer threats. Successfully penetrating the satellite and spacecraft market
- KMED is the largest independent microwave electronics components and sub system provider in Israel, supporting Israel, India, USA and other customers
- Kratos typically the Sole Source Provider to our customers

# Missile Defense and Hypersonic Programs



BMD Targets



Patriot



GBSD



SHORAD



AEGIS

- Kratos is the leading provider of Affordable Ballistic Missile Defense (BMD) Related Target Systems in the industry
- BMD Target Systems used to Test and Evaluate radar, missile defense and other systems and for operational readiness
- Kratos is the leading provider of missile and combat system/program sub systems and strategic deterrence systems
- Satellite Hypersonic and Ballistic Tracking Space Sensor (HBTSS) Program
- Integrated Battle Command System (IBCS) Missile Defense System Network Program and AEGIS Combat System
- Recapitalization of Strategic Weapon Systems to address peer/near peer threats driving business growth

## Space Force launches experimental research payload

*WASHINGTON — The U.S. Space Force launched an experimental research payload for the Air Force Research Laboratory, the Space and Missile Systems Center announced.*

*The AFRL payload for undisclosed research was placed onto a preplanned suborbital trajectory following its launch March 3 aboard a sounding rocket, which took off from NASA Wallops Flight Facility in Virginia. The Terrier-Terrier-Oriole Sounding Rocket was built by the Space Vector Corp. and Kratos Space and Missile Defense, the latter of which provided integration, interface and mission planning for the launch.*



*A Terrier-Terrier-Oriole sounding rocket, carrying an experimental research payload for the Air Force Research Laboratory, launches March 3 from NASA Wallops Flight Facility on Wallops Island, Va. (NASA Wallops)*



# Strategic Deterrence

GBSD



Hypersonic  
Systems

- Kratos is supporting the ~\$100 billion Ground Based Strategic Deterrence (GBSD), Minuteman III ICBM Replacement Program. In September 2020, Kratos was awarded a ~\$180 million contract to support Northrop Grumman for the development phase.
- Kratos supports multiple Hypersonic Systems Programs with our Launch System, Space and C5ISR Businesses
- GBSD and Hypersonic Systems are two of the best funded and fastest growing priority areas of DoD Budget
- GBSD, HBTSS, TITAN, IBCS, etc., Kratos supported Programs
- Recapitalization of Strategic Weapons Systems to address peer/near peer threats driving funding and growth

# Turbine Technologies and Engines



Engine



Gray Wolf



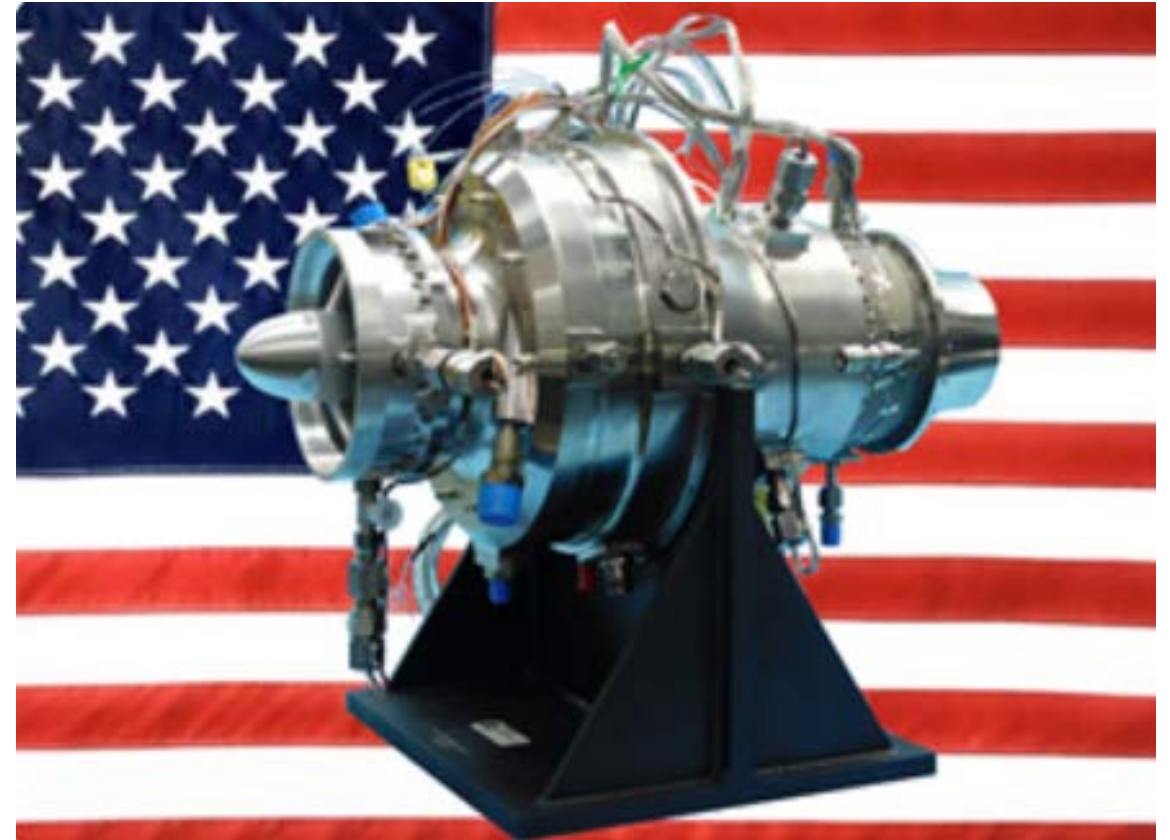
Speed Racer

- The Engine is typically the #1 Bill Of Material (BOM) cost element in a jet drone, cruise missile and powered munition system
- Kratos is looking to disrupt this class of engine market, similar to our drone initiatives; rapid development and fielding, improved performance and affordability
- DoD wants new technology, alternative engine providers and competition
- Thousands of engine applications and opportunities forecast: Gray Wolf, Speed Racer, Golden Horde, Skyborg, ABMS, Arsenal Plane, Attritables
- Kratos has multiple engines under customer funded development programs, including in the space and satellite area

SAN DIEGO, Jan. 12, 2021 (GLOBE NEWSWIRE) -- Kratos Defense & Security Solutions, Inc. (Nasdaq: KTOS), a leading National Security Solutions provider, announced today that Kratos' Turbine Technologies Division (KTT) has been awarded a \$12.7 million task order under its Advanced Turbine Technologies for Affordable Mission (ATTAM) ID/IQ contract. The program will be managed by the Turbine Engine Division of the Air Force Research Laboratory (AFRL/RQT). The award follows the successful ground testing of an affordable turbojet designed for use in future low-cost cruise missiles and attritable Unmanned Aerial Vehicles (UAVs). The design and test of the 200lb thrust-class turbojet engine was completed in under 18 months, demonstrating Kratos' ability to meet the needs of today's warfighter. Testing included characterization of the engine from ignition to overspeed conditions, characterization of engine performance including thrust, fuel efficiency and electrical power output, and engine durability. Testing was performed at the recently commissioned Kratos engine-test facility in Indiantown, Florida.

The objective of the awarded task order is to complete the engine development for flight testing and to demonstrate the targeted life low-cost engine architecture. Work will be performed by KTT in Florida.

## **Kratos Awarded \$12.7 Million Task Order to Complete Cost Optimized Turbojet Engine for Future Cruise Missiles and Attritable UAVs**

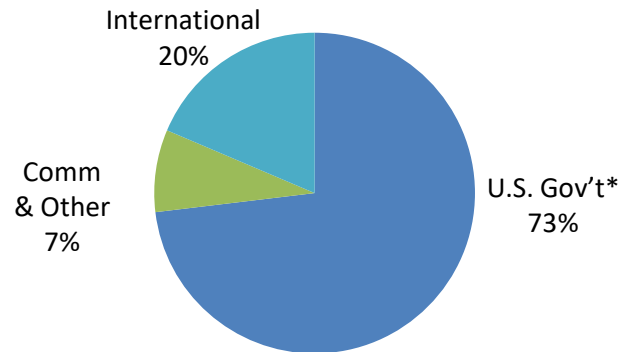


# Kratos 2021 First Quarter Execution Highlights

- Q121 Revenue \$194.2 million, up from Q120 Revenue of \$168.9 million. Organic growth in Unmanned Systems, Space and Satellite, Microwave Electronics, C5ISR and Rocket Support Solutions businesses and contribution from ASC Signal acquisition offset by reduction in scope of certain international Training Services contracts with net impact of \$5.0 million.
- Q121 Adjusted EBITDA of \$18.1 million, up from Q120 Adjusted EBITDA of \$16.3 million, primarily due to increased revenues and leverage realized on fixed manufacturing, overhead and SG&A infrastructure.
- Q121 Operating Income \$4.9 million, up slightly from Operating Income of \$4.7 million due to Q121 increase in non-cash stock compensation expense of \$1.5 million and increase in R&D expense of \$2.3 million
- Q121 Book-To-Bill ratio .8 to 1.0, LTM Book-to-Bill ratio 1.3 to 1.0. LTM Book-To-Bill ratio 1.3 to 1.0 for KGS and 1.2 to 1.0 for KUAS.
- Q121 Backlog \$892.9 million, down from Q420 Backlog of \$922.2 million and up from \$646.8 million at Q120. Q121 Funded Backlog \$620.7 million, Q121 Unfunded Backlog \$272.2 million
- Qualified Bid and Proposal Pipeline \$9.0 billion consistent with \$9.0 billion at Q420

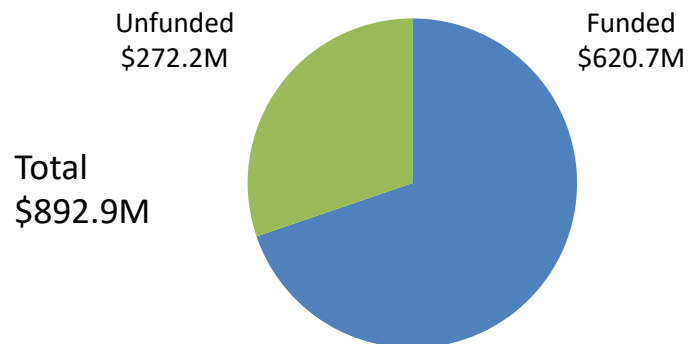
# Kratos – Recent Financial Highlights – FY21

3 Months Ended 3/28/21  
Revenue by Customer

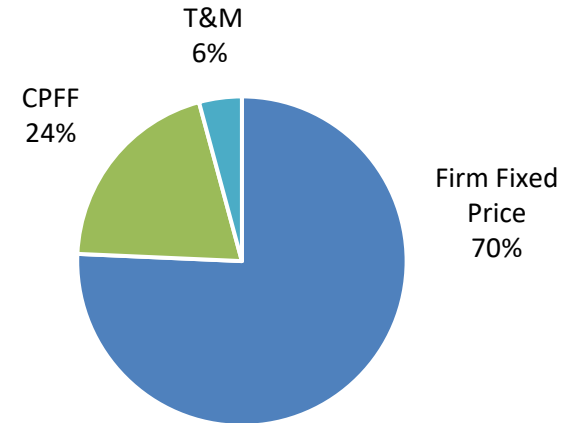


\*Includes Foreign Military Sales (FMS)

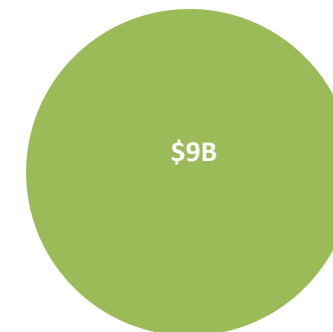
Backlog Ended 3/28/21



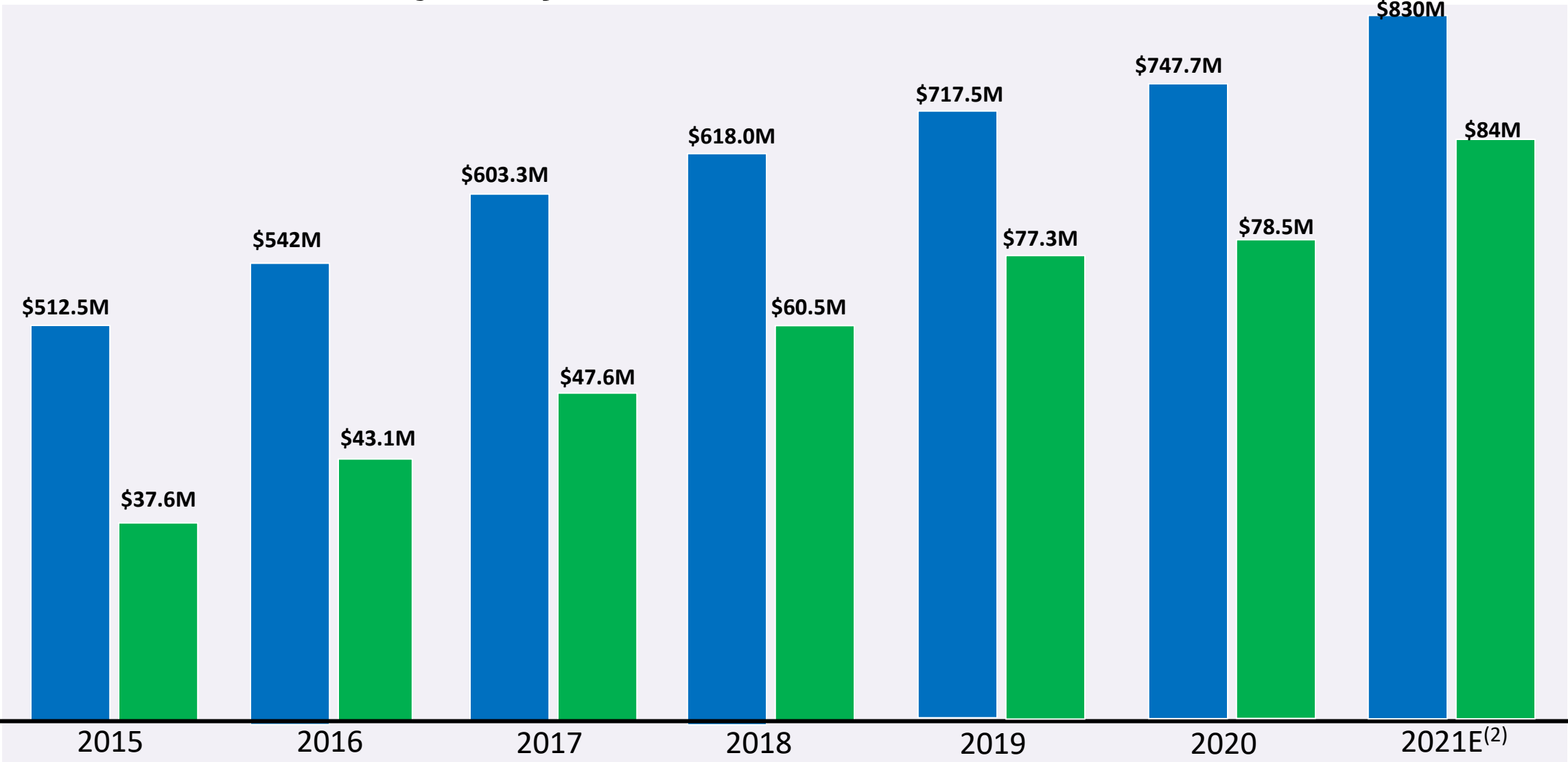
3 Months Ended 3/28/21  
Contract Mix



Bid & Proposal Pipeline Ended 3/28/21



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



Revenue (1) Recast to Present PSS as Discontinued Operations  
Adjusted EBITDA (2) Reflects mid-point of Company's 2021 Guidance

# Kratos Recent Financial Highlights Q121

	<u>Q121</u>
Gross Debt	\$300.3M
Cash	\$383.6M
Net Cash	\$83.3M
LTM Adjusted EBITDA	\$80.3M

- Kratos' Balance Sheet Positioned to Support Expected Future Growth and Investments Required For Multiple Recent New Program Awards, New Opportunities and Forecasted Growth
- Kratos is Focused Primarily on Organic Growth with Existing Programs/Platforms/Systems
- No Major Acquisitions Planned



# Kratos Investment Summary

- ***Technology Company in National Security Industry with Multiple New Program Awards Positioning Kratos for Long Term, Sustained Future Organic Growth, Forecast to Increase and Accelerate Beginning in 2022, as New and Development Programs Mature and Transition to Production***
- ***Primary Business Focus Areas Include: Drones and Artificial Intelligence, Space and Satellites, Microwave Electronics, Hypersonics and BMD***
- ***Tactical Drone Opportunity Could Transform Kratos as a Company***
- ***Affordability is a Technology and Affordability will be of Increasing Importance and a Key Differentiator for Kratos***
- ***2021 Currently Forecast to be Final Year of Increased Internal Investments to Execute on and Pursue New Programs and Opportunities, Resulting in Expected Increased and Accelerating Growth Trajectory in 2022***

# Technology Innovation for National Security

## Technology Innovation for National Security

Kratos specializes in areas where technology advances can have a force multiplier effect.

