

# Leidos Capabilities Supporting the Space Industry

# LEIDOS BY THE NUMBERS

# 60+ YEARS

OF SUPPORT PROVIDED TO NASA AND THE SPACE INDUSTRY

# #2

GOVERNMENT IT AND SYSTEMS INTEGRATION WASHINGTON TECHNOLOGY

56%

EMPLOYEES WITH STEM DEGREES

20% EMPLOYEES WHO ARE MILITARY VETERANS For more than 60 years, Leidos has supported deep space exploration and human spaceflight with technical expertise in IT, engineering, and science. Throughout our history, we have developed a strong understanding of the scientific environment and R&D capabilities needed to support public and private sector space exploration and human spaceflight missions. Building on this critical foundation, Leidos offers agile, affordable, and mission-oriented solutions delivered by experienced staff with track records of success at NASA centers, and the engineering and scientific community.

As a company, Leidos brings enterprise-wide capabilities to the space industry. We continually invest in the people, processes, and innovative technologies serving this important customer segment and have developed and fostered formal programs including Internal Research and Development (IRAD); Employee Resource Groups devoted to technical skills and training; Communities of Practice; STEM-centric employee, intern, and community-based initiatives that contribute and shape how we design and deliver customer solutions.



# AUTOMATED OBJECT DETECTION FROM IMAGERY

Characterization and geo-location of objects in imagery with 24x7 near real-time alerting and published results to Structured Observation Management (SOM) data stores/ workflows

# **CLOUD-BASED IMAGERY EXPLOITATION**

Data ingest, optimization, access, tiling, and highperformance Session Initiation Protocol (SIPS) compliant imagery rendering

# **COMMERCIAL LEO & CISLUNAR SERVICES**

Requirements definition, planning, payload design, mission integration, data analytics, human factors engineering, space food development, radiation analysis and autonomous software design

#### **COMPLEX LOGISTICS**

Planning, coordination, preparation, and packing of standardized containers for all International Space Station (ISS) cargo missions by international partner and commercial cargo vehicles

#### **CYBER DEFENSE**

Assessment, training, roadmaps, integrated tool solutions, measures of effectiveness, fact-based data analytics, visualization, resiliency, and automation to support analytical workflows

#### **FOOD DEVELOPMENT & PACKAGING**

R&D, production, and efficient packaging of safe, nutritious, and palatable food that sustains ISS crew while meeting safety and health requirements

#### **HOSTED PAYLOADS**

Development of Wide Field of View (WFOV) staring Overhead Persistent InfraRed (OPIR) sensors for missile detection, onboard processing and data analytics

#### **HUMAN HEALTH & RADIATION**

Development of state-of-the-art radiation monitoring systems, critical assessments of spacecraft shielding, and 24x7 console support for the Human Research Program for 16+ years

#### **KEY MANAGEMENT**

Design and development of cryptographic key management systems to update secure satellite communication encryption systems and enable compatibility with DoD Key Management Infrastructure (KMI)

#### **MISSION & ENTERPRISE IT**

Modernization of the full spectrum of IT including virtual collaboration, cloud/data center solutions, network/ application services, asset management, and service desk

## PLAN/TRAIN/FLY

Development of human spaceflight operations capability, with direct support to mission preparations, crew, flight controller, instructor, and analyst training, and real-time mission execution

#### **SCIENCE & RESEARCH MANAGEMENT**

Delivery of medical services, food services, research, technology development, engineering, operations, and flight hardware development to support health, safety, and productivity of crews in space

#### SENSOR DEVELOPMENT

Design and development of active and passive space and airborne electro-optical sensor systems to support space situational awareness

#### **SPACE HUMAN FACTORS**

Human-centered design (HCD) for space-related hardware and software – including ergonomics, human-computer interaction, acoustics, and lighting – with expertise in requirements, prototyping, human-in-the-loop testing, human performance evaluation, and peer-reviewed space human factors research

## **SPACE MISSION INTEGRATION & OPERATIONS**

Design, develop, operate, and sustain mission control and training systems with expertise in ground/large-scale satellite command and control and telemetry

# STRUCTURED OBSERVATION MANAGEMENT

Big data harvesting of feature information contained in images

#### SYSTEM ON A CHIP

Custom, high-performance, reprogrammable processor intended for computationally intensive real-time software applications

#### **SYSTEMS & SPECIALIZED ENGINEERING**

Systems design, engineering, development, fabrication, integration, testing and verification including concepts of mission operations and in-space satellite servicing

Leidos is a Fortune 500<sup>®</sup> information technology, engineering, and science solutions and services leader working to solve the world's toughest challenges in the defense, intelligence, homeland security, civil, and health markets. The company's 32,000 employees support vital missions for government and commercial customers.



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