



ENVISION

Goddard

*Facility Master Plan
Concept – August 9, 2018*



“Building what we’ve never built before, to discover what we’ve never known before.”

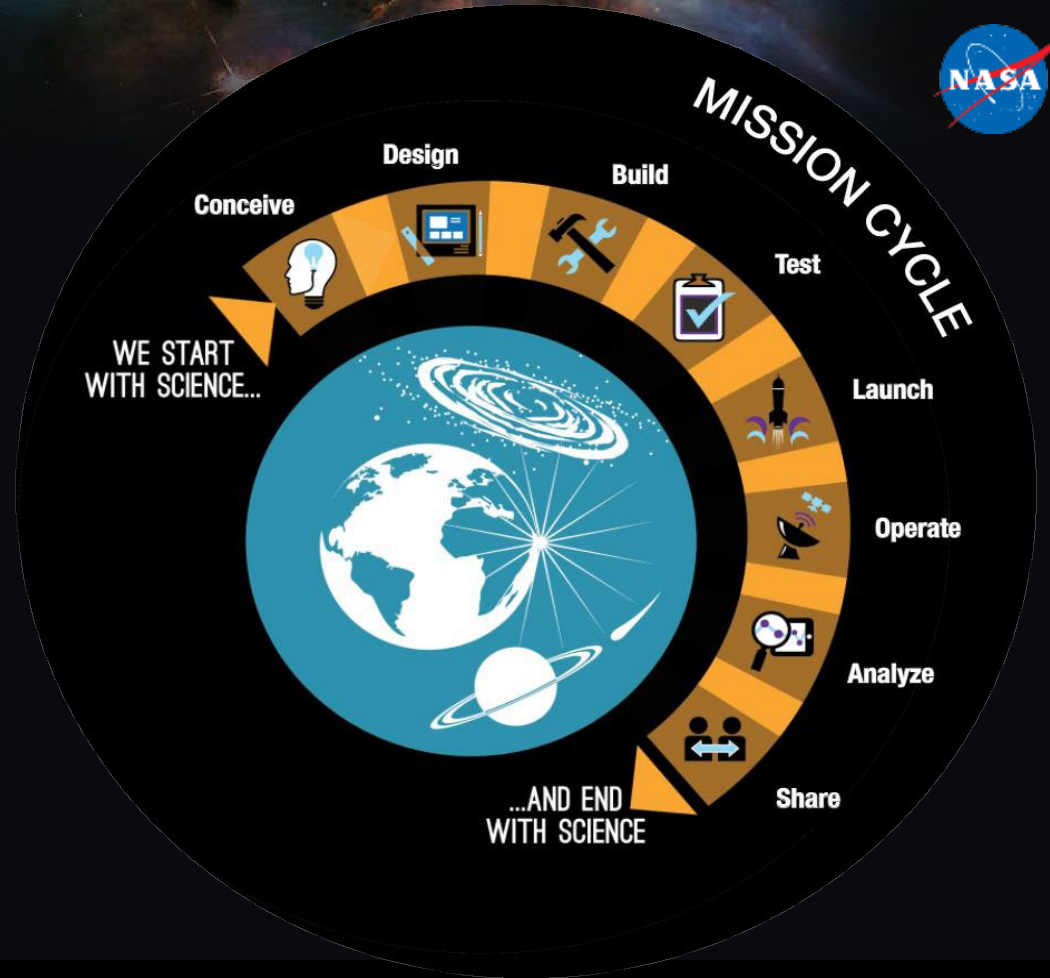
GODDARD TODAY



What We Do

Through science, Goddard:

- Advances NASA's mission to answer humanity's greatest questions
- Develops revolutionary capabilities in spacecraft and instruments that have never been done before
- Integrates the largest concentration of earth and space scientists, engineers, technologists, project managers, and partners in the United States
- Delivers unique and world renowned end-to-end mission cycle capability
- Executes the largest portfolio value of Agency partnerships
- Manages unique worldwide assets for the Agency



What We Do (continued)



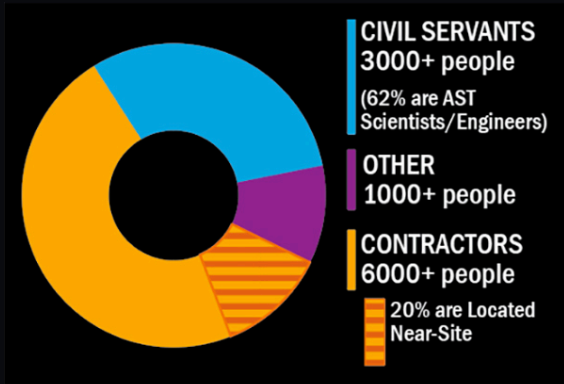
- Manage space communication locations and conduct launch operations on 6 continents, in 12 countries and 12 States/Territories
 - 98% of all NASA data comes through Goddard via Space Network and Near Earth Network, which collectively transmit 29.5 TB of data per day
 - Near Earth Network supports about 40 NASA and other agency satellites
 - Launch sites include: Wallops Island VA; Poker Flat, AK; Alice Springs, Australia; Wanaka, New Zealand; Svalbard, Norway; and Antarctica





Who We Are

One Center
Six Unique Sites + Many
Other Locations Worldwide
Over 10,000 People



GODDARD SPACE FLIGHT CENTER



	GREENBELT GREENBELT MARYLAND	WALLOPS FLIGHT FACILITY (WFF) WALLOPS ISLAND VIRGINIA	WHITE SANDS COMPLEX (WSC) LAS CRUCES NEW MEXICO	COLUMBIA SCIENTIFIC BALLOON FACILITY (CSBF) PALESTINE TEXAS	GODDARD INSTITUTE FOR SPACE STUDIES (GISS) NEW YORK CITY NEW YORK	INDEPENDENT VERIFICATION & VALIDATION (I&V) FAIRMONT WEST VIRGINIA	GODDARD TOTALS
BUILDINGS (GSF) 	4,113 K	1,134 K	224 K	52 K	43 K	80 K	5,776 K*
WORKFORCE 	8,300 34% 10% 56%	1,200 25% 4% 71%	430 2% 89% 9%	80 0% 6% 94%	160 20% 64% 16%	220 21% 0% 79%	10,390 30% 10% 60%
SIZE (ACRES) 	1,300	6,200	49	483	---	12	8,044

* These total numbers include all of the Goddard worldwide locations.

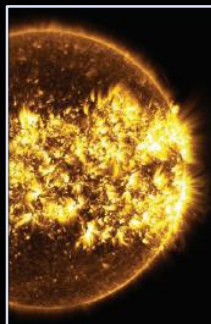
Center Roles



EARTH SCIENCE



ASTROPHYSICS



HELIOPHYSICS



PLANETARY SCIENCE



SPACE COMMUNICATION AND NAVIGATION



SUBORBITAL PLATFORMS AND RANGE SERVICES



CROSS-CUTTING TECHNOLOGIES

Sensor Systems and Instrument Platforms

Large-Scale Scientific Information Systems, Data Processing and Dissemination

In Space Robotics



OTHER ENABLING CAPABILITIES

Program and Project Management

End-to-End Mission Systems Architecture and Engineering

Safety and Mission Assurance

Envision Goddard



VISION STATEMENT: *We revolutionize knowledge by discovering the secrets of the Universe, searching for life elsewhere, and safeguarding and improving life on Earth.*

Goddard and its NASA and Non-NASA partners will:

- Continue to develop revolutionary capabilities in spacecraft and instruments that have never been done before
- Advance our lead Center roles for scientific discovery, space operations and technology for the Agency
- Apply our knowledge of scientific discovery, space operations and technology to help NASA exceed its objectives for new destinations of the exploration program
- Ensure that NASA meets its commitments to other National space and scientific priorities

Alignment with NASA's Mission and Strategic Plan



SMD

Science Mission Directorate

STMD

Space Technology Mission Directorate

HEOMD

Human Exploration and Operations Mission Directorate

Goddard Roles	Earth Science	Astrophysics	Heliophysics	Planetary Science	Cross-Cutting Technology	Other Enabling Capabilities	Suborbital Platforms and Range Services	Space Communications And Navigation
	DISCOVER NASA's enduring purpose of scientific discovery	■	■	■	■	■	■	■
EXPLORE NASA's push to expand the boundaries of human presence in space			■	■	■	■	■	■
DEVELOP NASA's mandate to promote the technologies of tomorrow	■	■	■	■	■	■	■	■
ENABLE Capabilities, workforce, and facilities for NASA to achieve its Mission	■	■	■	■	■	■	■	■

- **INTEGRATED MISSION:** Create and maintain integrated multi-program and project in-house science, engineering and project management facilities that meet the technology, mission and collaborative work space requirements of integrated NASA and partner teams
- **AFFORDABLE MISSION:** Create sustainable campuses with resilient and affordable facilities and infrastructure

MASTER PLAN

MSD

Mission Support Directorate



Strategy Drivers

- Goddard's product focused business strategy drives a facility strategy to:
 - Update technical capabilities to meet future mission product demands
 - Create and consolidate flexible integrated product team space to maximize effective mission delivery
- Goddard's business strategy will carefully balance affordability benefits of on-site NASA real property consolidations with ongoing NASA program and project cost, schedule, and mission success
- Goddard's IT Architecture will evolve through a hybrid cloud architecture to a much more efficient and much more secure computing environment. This IT evolution will also include capturing the momentum of digital transformation to further enable our workforce in areas such as risk-based data management, with better data security and appropriate accessibility, in virtual teaming tools and virtual desktops and in evaluating automation-enabled efficiencies for Center operations
- In order to meet current industry standards we have to become a more efficient organization by reducing our operating costs by 25%

Strategy Priorities



- In response to the Mission Support Council's (MSC) call for making NASA's footprint more affordable over the next 20 years, the Master Plan will encompass Goddard's overall affordability strategy to balance improvements with ongoing mission success using the following 3 priorities:
 - **Create and Maintain Mission Readiness:** to ensure mission success
 - **Achieve an Affordable and Sustainable Center:** to achieve mission success at a better value
 - **Envision Goddard's Future Campus:** to attract and retain best talent for mission success



It is difficult to say what is
impossible...
for the ***dream of yesterday***
is the ***hope of today***
And the ***reality of tomorrow.***

- *Robert H. Goddard (1882 - 1945)*