

# THE MISSION OPERATIONS DIFFERENCE

SPACEFLIGHT EXPERTISE  
PROVEN VALUE  
MISSION FOCUS  
SUCCESS DELIVERED

## FOUNDATIONS OF MISSION

## OPERATIONS

### 1 To instill within ourselves these qualities essential to professional excellence

**DISCIPLINE** Being able to follow as well as to lead, knowing that we must master ourselves before we can master our task.

**COMPETENCE** There being no substitute for total preparation and complete dedication, for space will not tolerate the careless or indifferent.

**CONFIDENCE** Believing in ourselves as well as others, knowing that we must master fear and hesitation before we can succeed.

**RESPONSIBILITY** Realizing that it cannot be shifted to others, for it belongs to each of us; we must answer for what we do, or fail to do.

**TOUGHNESS** Taking a stand when we must; to try again and again, even if it means following a more difficult path.

**TEAMWORK** Respecting and utilizing the abilities of others, realizing that we work toward a common goal, for success depends upon the efforts of all.

**VIGILANCE** Always attentive to the dangers of spaceflight; never accepting success as a substitute for rigor in everything we do.

### 2 To always be aware that suddenly and unexpectedly we may find ourselves in a role where our performance has ultimate consequences.

### 3 To recognize that the greatest error is not to have tried and failed, but that in the trying we do not give it our best effort.



National Aeronautics and Space Administration



## MISSION OPERATIONS

SPACECRAFT DEVELOPMENT

MISSION PLANNING

SPACEFLIGHT TRAINING

MISSION INTEGRATION

MISSION CONTROL



## MISSION SUCCESS



Johnson Space Center

*All too often, successful missions and sometimes even crew and spacecraft survival are delivered on the strength of the operations team. That strength is found in the team's expertise and preparation as well as on proven leadership. This is the kind of leadership environment where it goes without saying that everyone on the team will deliberately and consistently do the right thing for the right reason; will work to be as good as they can in whatever role they serve; and are willing to step up and make the call.*

1960

1970

1980

1990

2000

2010

## SPACEFLIGHT EXPERTISE

**LEADERS IN HUMAN SPACEFLIGHT OPERATIONS SINCE 1960**

**UNMATCHED EXPERIENCE** in human spaceflight operations

- 550,000+ human hours in space including 13 years of controlling continuous spaceflight ops
- 164+ launch/landings
- 68+ dockings/undockings
- 244+ spacewalks
- ~1,000,000 pounds delivered to ISS
- 134 satellites deployed
- 50 payloads retrieved
- 40 ISS elements installed and activated on-orbit
- ~400,000 spacecraft commands per year

**INTEGRATION** of industry and government partners around the clock and around the globe, including:

- 5 space agencies
- 11 control centers
- 8 vehicles

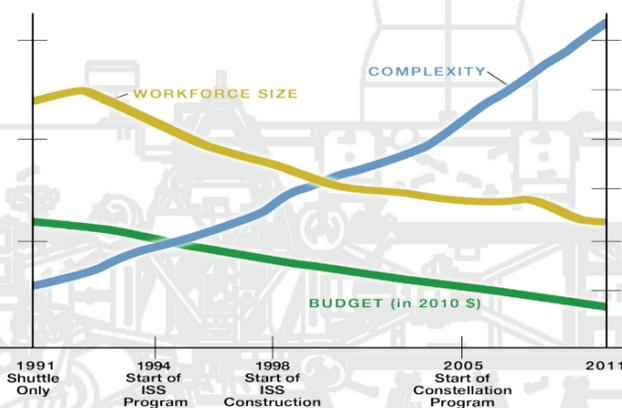


**LEADERSHIP** at every level within the organization providing solutions to complex operational challenges

**CRITICAL DECISION MAKING** to ensure safe and successful missions

## PROVEN VALUE

**INNOVATIONS THAT REDUCE COSTS FOR INCREASINGLY COMPLEX MISSIONS**



**NEW INITIATIVES** that demonstrate a consistent record of driving significantly lower cost while maintaining a high standard of excellence in an increasingly complex environment

**BEST PRACTICES** incorporated through benchmarking of private industry, Department of Defense, and other NASA centers as part of our commitment to unrelenting improvement

**COMMODITY SOLUTIONS** to modernize mission control, planning, and simulation technology



## MISSION FOCUS

**FLEXIBLE INTEGRATED SOLUTIONS TAILORED TO ANY MISSION**

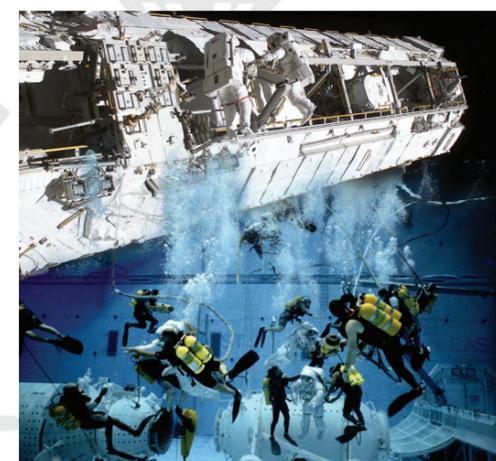
**COMPREHENSIVE** mission operations solutions for low Earth orbit and beyond - ISS, Shuttle, and Exploration

**VISITING VEHICLE** integration to ensure the safety and success of multi-vehicle operations to ISS - Shuttle, Soyuz, Progress, ATV, HTV, and Commercial Vehicles



**ANALOG MISSIONS** planning and execution for conducting research in desert, ocean, and orbiting platforms

**TECHNOLOGY INITIATIVES** apply Mission Operations expertise to technology developments and new destinations



## SUCCESS DELIVERED

**LEVERAGING NATIONAL ASSETS**

**SPACECRAFT AND MISSION DEVELOPMENT** - Operations expertise applied to spacecraft design and development from concept through mission completion to meet mission goals, mitigate redesigns, and reduce life cycle costs

**MISSION SYSTEMS** - Ready-to-use facilities that lower startup costs for mission control, simulators, mock-ups, and space communication assets with built-in expertise to incorporate and manage change in active operational environments

**MISSION ASSURANCE** - Risk management through critical decision making, trading schedule, budget and technical risk, culminating in those final decisions that must be made in the unique real-time environment which have the ultimate consequences



**MISSION OPERATIONS** - Proven leadership and experience to deliver mission planning, training, and execution

**BE READY FOR THE FUTURE.**

*Team with the leaders in spaceflight operations...*

For more information, visit  
[www.nasa.gov/centers/johnson/capabilities](http://www.nasa.gov/centers/johnson/capabilities)



**Johnson Space Center**  
Houston, TX  
[jsc-mod@mail.nasa.gov](mailto:jsc-mod@mail.nasa.gov)