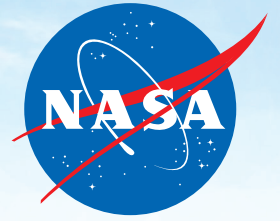


**NASA's Independent Verification and Validation Program**  
is located at the Katherine Johnson IV&V Facility in Fairmont, WV.



# NASA's IV&V PROGRAM



## EXPLORE IV&V Program Services:

### **System & Software Assurance**

Full lifecycle IV&V and independent assessments for NASA's highest profile missions. IV&V leads to higher quality, reduced risk, greater insight, reduced cost and increased knowledge transfer.

### **Safety and Mission Assurance (SMA) Support**

Common support infrastructure for assuring core Software Assurance functions across the Agency, including support for Commercial Crew Program (CCP). Software Assurance Research Program (SARP).

### **Mission Protection Services (MPS) and Engineering Services**

MPS Lifecycle and Integration, Cybersecurity Assessment Team, Threat/Risk Assessment, Vulnerability Assessment, CyberLab, Model Based Mission Assurance (MBMA).

### **Software Development, Testing, and Research**

Independent Test Capability (ITC), Simulation, Testing, Automation, Virtualization, Digital Twin development. Enabled through IV&V's Jon McBride Software Testing and Research (JSTAR) Laboratory.

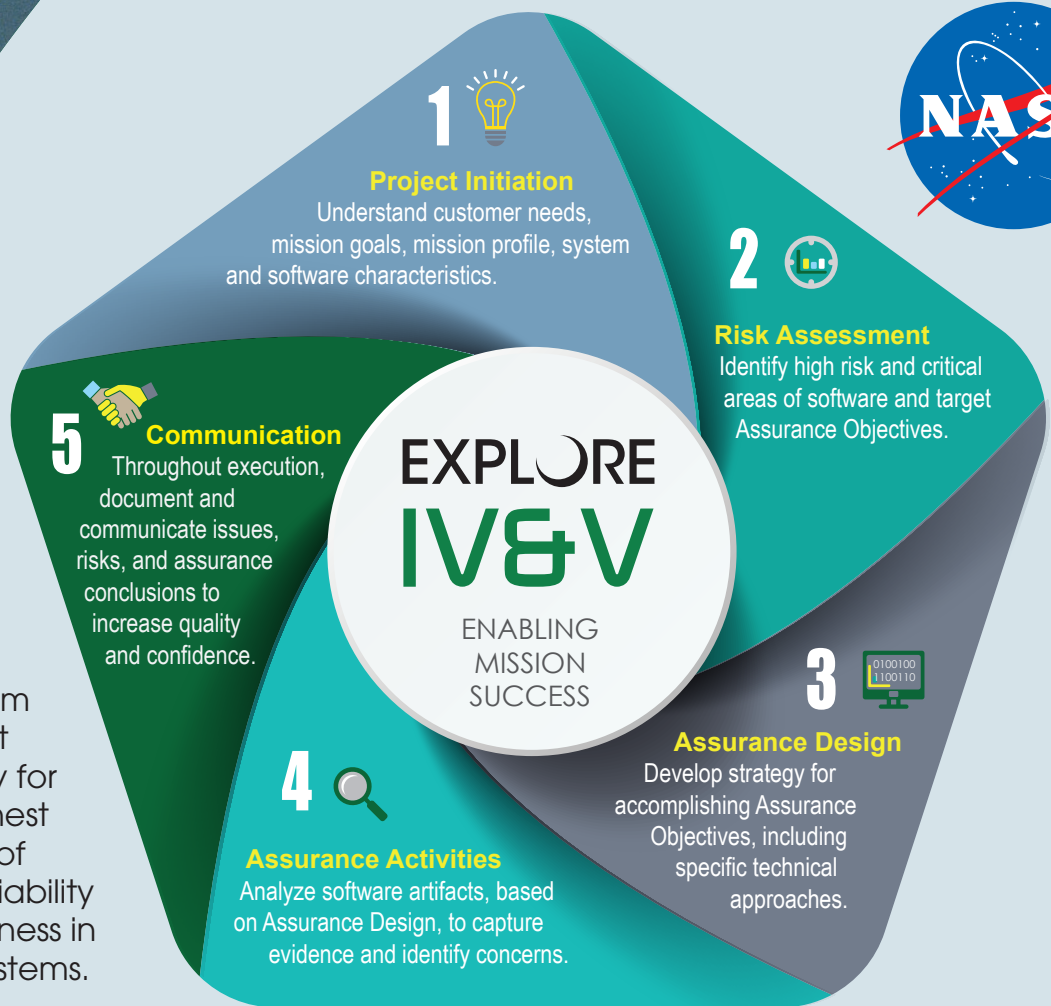
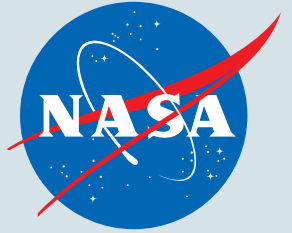
### **STEM Engagement**

Educator workshops, equipment loan program, STEM competitions, internships and student workshops.

## Ensuring Safe, Reliable, Secure Operation of Safety Critical & Mission Critical Software



Left: The maiden launch of space shuttle Challenger, which carried the first TDRS satellite to orbit.



The IV&V Program is an integral part of NASA's strategy for providing the highest achievable levels of safety, security, reliability and cost effectiveness in critical software systems.

## About NASA's IV&V Program

NASA's IV&V Program was established in 1993 as a direct result of recommendations made by the National Research Council (NRC) and the Report of the Presidential Commission on the Space Shuttle Challenger Accident. Since its inception, the IV&V Program has been contributing to the safety and success of NASA's highest-profile missions by assuring the software on those missions performs correctly. The IV&V Program falls administratively under NASA's Goddard Space Flight Center (GSFC) located in Greenbelt, Maryland and operates under functional guidance from the Office of Safety and Mission Assurance (OSMA).

The Katherine Johnson Independent Verification and Validation (IV&V) Facility, home of NASA's IV&V Program, is located in the heart of West Virginia's technology sector in Fairmont, West Virginia. The facility is named in honor of West Virginia native and NASA "hidden figure" Katherine Johnson. Born in White Sulphur Springs, West Virginia in 1918, Katherine's intense curiosity and brilliance with numbers lead her to a distinguished career with the National Advisory Committee for Aeronautics and NASA.

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