



# Improving NASA's Agility through Increased Use of Federally Funded Research and Development Centers

*National Aeronautics and Space Administration*

**Summary of Proposal:** This proposal would establish an accelerated process for determining whether one or more of the National Aeronautics and Space Administration's (NASA) Centers should be converted to, or host, a Federally Funded Research and Development Center (FFRDC). FFRDCs can potentially allow the agency to be more agile in rapidly responding to changing needs and in recruiting and retaining scientific and technical expertise.

## THE CHALLENGE

---

The missions and programs of NASA are conducted across 10 geographically-dispersed Centers, augmented by several testing and support facilities. While nine of the Centers are Government owned and operated, the Jet Propulsion Laboratory is operated by the California Institute of Technology as an FFRDC.

In 2004, the President's Commission on Implementation of United States Space Exploration Policy found that NASA Centers: 1) needed to modernize their infrastructure; 2) lacked institutional incentives to align them with new policy; and 3) utilized often ossified personnel practices. The Commission recommended that NASA Centers be reconfigured as FFRDCs to enable innovation, work more effectively with the private sector, and stimulate economic development. With the advent of the President's National Space Strategy, a renewed look at the FFRDC operating model is warranted as part of NASA's broader strategy to meet the Administration's ambitious space objectives. This proposal would establish a process for determining whether one or more of NASA's other Centers should be converted to, or host, an FFRDC.

## THE OPPORTUNITY

---

The new National Space Strategy and National Space Policy Directive 1 require the full agility of NASA, in concert with its commercial and international partners, in order to realize the President's goals to return American astronauts to the moon and follow with human missions to Mars. In order to bolster NASA's agility, increased use of FFRDCs could provide greater flexibility than civil servant organizations, potentially allowing them to better meet the agency's evolving needs.

## WHAT WE'RE PROPOSING AND WHY IT'S THE RIGHT THING TO DO

---

### *Background on FFRDCs*

FFRDCs are research institutions that are owned by the Federal Government, but operated by contractors. They are intended to provide Federal agencies with Research and Development (R&D) capabilities that cannot be effectively met by the Federal Government or the private sector alone, and can convey a number of benefits, including the ability to recruit and retain scientific and technical expertise, and to more rapidly respond to the R&D needs of a Federal agency than would be possible with a civil servant workforce.



The new National Space Strategy and National Space Policy Directive 1 make examining the potential advantages of an FFRDC model at NASA particularly timely. FFRDCs may offer a powerful approach to enable NASA to better align its workforce skillsets with Agency priorities, while simultaneously engendering an entrepreneurial spirit that better allows NASA to infuse talent from industry and commercial partners.

FFRDCs offer a number of advantages over traditional NASA Centers in terms of their competitive compensation to employees, flexibility, and technical skills available to the Agency. They occupy a unique position in the Nation's R&D base: they are free from many of the outdated mechanisms inherent in the civil service, and can also perform work for non-Government customers. As a result, FFRDCs are noted for their technical excellence, strong integration with the U.S. industrial base, and agility. All of these are essential as NASA works to meet the bold objectives laid out in the National Space Strategy and National Space Policy Directive 1.

#### *Process to Determine Best Role for FFRDCs*

This proposal lays a process to determine if one or more of NASA's other Centers should be converted to, or host, an FFRDC. NASA would oversee this process and provide an analysis, including recommendations, to the White House by the end of August 2018 so that the outcome can be reflected in future budget and policy plans and proposals. NASA's analysis would draw from prior studies of this topic and evaluate the potential of an FFRDC to further the Administration's policy goals more effectively. In addition to studying whether one or more Centers could potentially be converted to an FFRDC in whole or in part, NASA would also establish whether it may be effective to perform new programs and projects using an FFRDC structure.

The additional analysis needed before increasing the use of FFRDCs will address the following:

- Although FFRDCs have several advantages over Government-owned and operated facilities, they can also have drawbacks. A 2017 report by the Congressional Research Service, for example, noted concerns with FFRDCs including mission creep, ineffective Federal agency oversight, and competition between FFRDCs and the private sector for Federal R&D funding.<sup>1</sup> The analysis will weigh the specific costs and benefits of establishing an FFRDC for particular NASA Centers.
- It is possible that a new FFRDC hosted at a Center may be effective in running new programs or projects that are part of the Administration's space policy but are not yet underway. The analysis will examine whether these programs could more effectively be run by establishing a new FFRDC.

Conversion of a Center, or parts of a Center's operation, to an FFRDC would require several steps related to developing the sponsoring agreement with the organization managing the FFRDC, and addressing human capital issues. The analysis will examine these steps and estimate their feasibility.

---

<sup>1</sup> Congressional Research Service, "Federally Funded Research and Development Centers (FFRDCs): Background and Issues for Congress," December 1, 2017.