National Aeronautics and
Space Administration

EXPLORE SCIENCE

Internal Scientist Funding Model

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Michael H. New, PhD

Deputy Associate Administrator for Research
Science Mission Directorate

ISFM Overview

ISFM History

NASA's Internal Scientist Funding Model (ISFM) was created as a result of a 2015 internal study performed by the Agency Competition Team, created by then Associate Administrator, Mr. Robert Lightfoot. That study concluded that:

- NASA employs about 1,000 Civil Servant Scientists, about 150 FTEs-worth (spread over ~350 scientists) are funded through competed research awards;
- Unlike Other Government Agencies (OGAs), internal (NASA CS) and external scientists (*e.g.,* university researchers) compete for the same funding;
- NASA spends significant resources competing for already appropriated research funding dollars;
- Early Career scientists have a hard time competing with older, more established researchers, and face a system that doesn't nurture them;
- Scientists spend too much time writing proposals that only cover a small fraction (0.1 FTE) of their time, forcing them to write many proposals; and,
- There has previously been no strategic hiring of scientists. Hiring decisions have been made at Centers without HQ consultation and, therefore, without any NASA-wide planning.

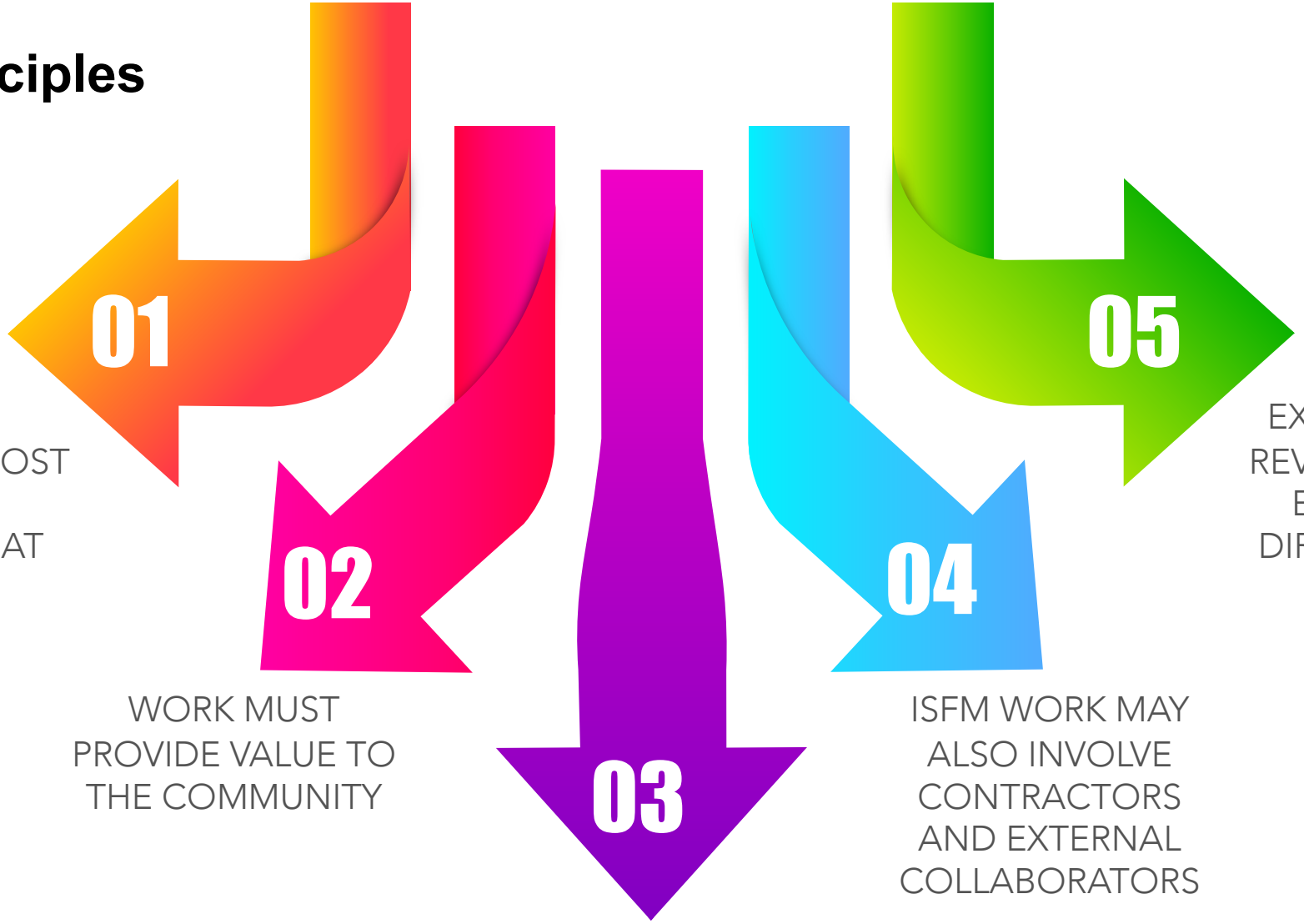
Role(s) of NASA Civil Servant Scientists

Based on internal discussions within SMD, CS Scientists perform several roles beyond just doing research:

- They are stewards of NASA mission science requirements and mission success including instrument team leadership (Project Science).
- With their unique understanding of NASA's goals and processes, NASA scientists lay the foundations for future strategic missions through focused technology and scientific methodology development, and through performing essential precursor science activities (Mission-Enabling Research & Tech Development).
- They serve in inherently governmental leadership roles within NASA science organizations and in the broader scientific community (Leadership).
- In support of their inherently governmental goals, NASA scientists generate new knowledge through their leadership of large, complex collaborations with the breadth of the scientific community and the performance of "as only NASA can" research and analysis (Research and Analysis).

It is in the National interest that the many activities performed by Civil Servant (CS) scientists be conducted and supported in a way that optimizes the NASA workforce's productivity and realizes its leadership potential.

ISFM Key Principles



01 NATIONAL INTEREST TO HOST CERTAIN CAPABILITIES AT CENTERS

02 WORK MUST PROVIDE VALUE TO THE COMMUNITY

03 WORK THAT COULD BE COMPETED SHOULD BE

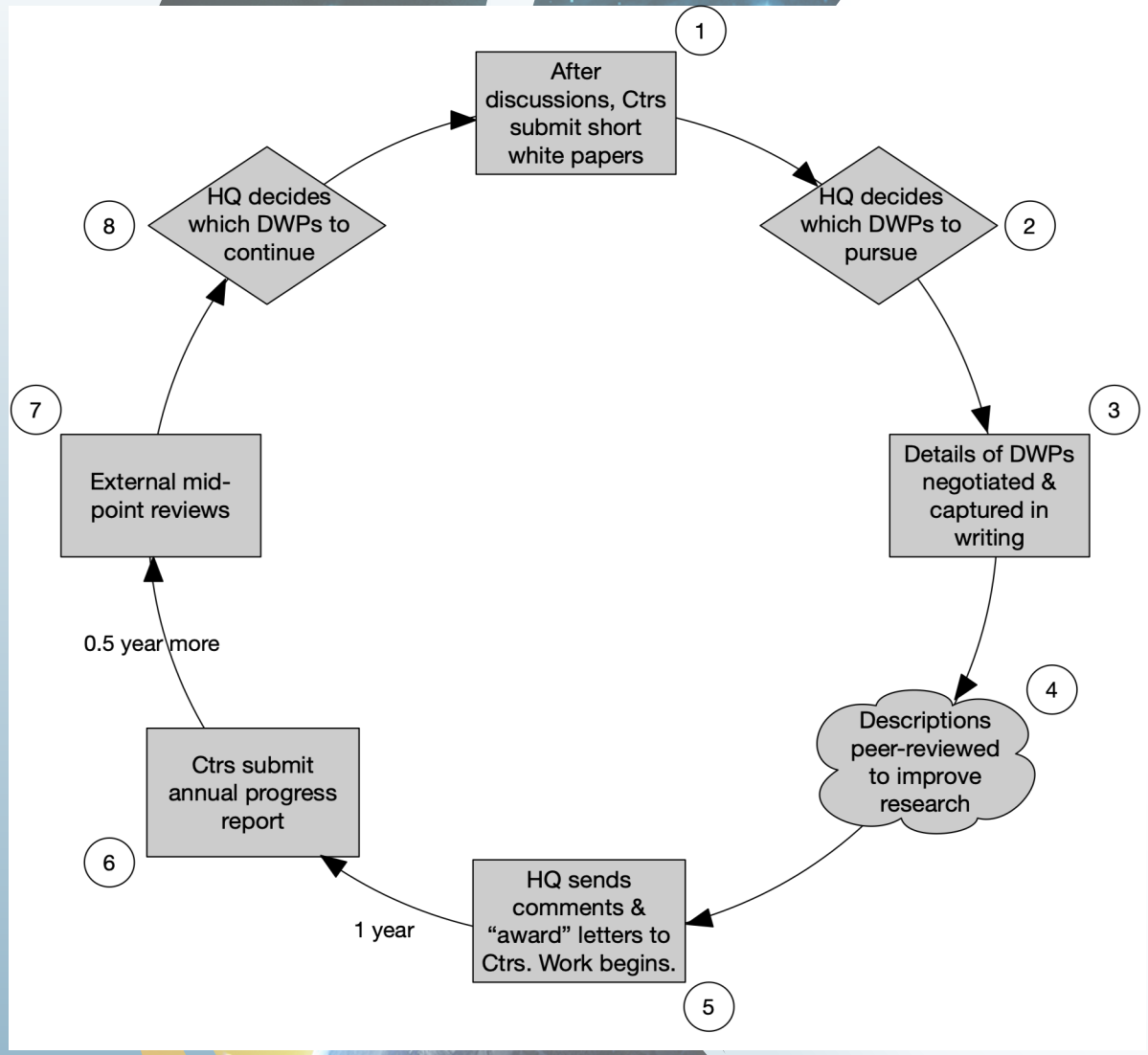
04 ISFM WORK MAY ALSO INVOLVE CONTRACTORS AND EXTERNAL COLLABORATORS

05 EXTERNAL PEER REVIEW IS A CORE ELEMENT OF DIRECTED WORK

ISFM Measures of Success (by agreement between SMD and OCS)

	Criteria	Goal
1	More research work is directed to the centers rather than competed.	Reduce CS FTE in competed R&A by 25%
2	Fewer R&A proposals are submitted, scientists can focus more time on research activities geared toward NASA goals.	Reduce proposals and time spent writing proposals
3	HQ and science capability leads are involved in strategic hiring decisions	Hiring areas are approved by HQ
4	Positive feedback (via survey) of HQ program managers and center managers, and scientists.	Improve satisfaction
5	Scientists are able to participate in more review panels without conflict-of-interest issues.	Improve participation
6	NASA scientists continue to publish research in the peer-reviewed literature	Maintain quality
7	External review panels continue to rate the quality of NASA science as high, initially on a three-year review cycle.	Maintain quality
8	The balance of research funding support to the external community is maintained.	Maintain balance of external/internal funding

ISFM Implementation



- Initial implementation was not uniform across SMD and appeared to the Centers to be chaotic.
- SMD-wide implementation plan negotiated with the Divisions and finally adopted in July 2019.
- Approach combined close coordination between Centers and HQ with the use of external peer review to improve research plans.

Questions? Comments? Suggestions?