



NASA Headquarters
Washington, DC 20546

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HQOWI8070 - M014
REVISION B
May 18, 2002

HEDS Technology Planning Process

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Approved and Signed by

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Associate Administrator, Acting
Human Exploration and Development of Space**

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DOCUMENT HISTORY LOG

Status (Draft/ Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		12-14-1998	
Revision	A	04-16-99	Document changes resulting from DNV Pre-Registration Audit findings. Section 7 (Records) changed to agree with Retention criteria of NPG 1441.1B
Revision	B	05-18-02	Sections 6 and 7 amended to reflect organizational changes and an improved technology planning process. The quality records have been re-defined based on the current process.

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1.0 PURPOSE

The purpose of this OWI is to document the process for planning technologies within the HEDS enterprise.

The Associate Administrator (AA) for the Office of Space Flight (OSF) is responsible for maintaining this document. The controlled version of the manual is available on the world wide web (WWW) via the HQ ISO 9000 Document Library for the ISO 9000 QMS at <http://hqiso9000.hq.nasa.gov>. By definition, any printed version of this OWI is uncontrolled. Any proposed revision to this manual is submitted by the AA for OSF or his designee. The AA for OSF or his designee, authorizes approval of the revision after an internal review by the Document Control Board.

2.0 SCOPE

This OWI prescribes the process used by personnel within the NASA Headquarters, HEDS enterprise to develop and plan for future HEDS technologies.

3.0 DEFINITIONS

HEDS - Human Exploration and Development of Space, one of NASA's five Strategic Enterprises. It is comprised of the Office of Space Flight.

THREADS - Technology for Human/Robotic Exploration and Development of Space, a family of strategic research and technology road maps defining the technology areas of future importance to HEDS.

ESMB - Exploration Senior Management Board. Senior representatives of the several Centers and Enterprises involved in the success of HEDS technology investments.

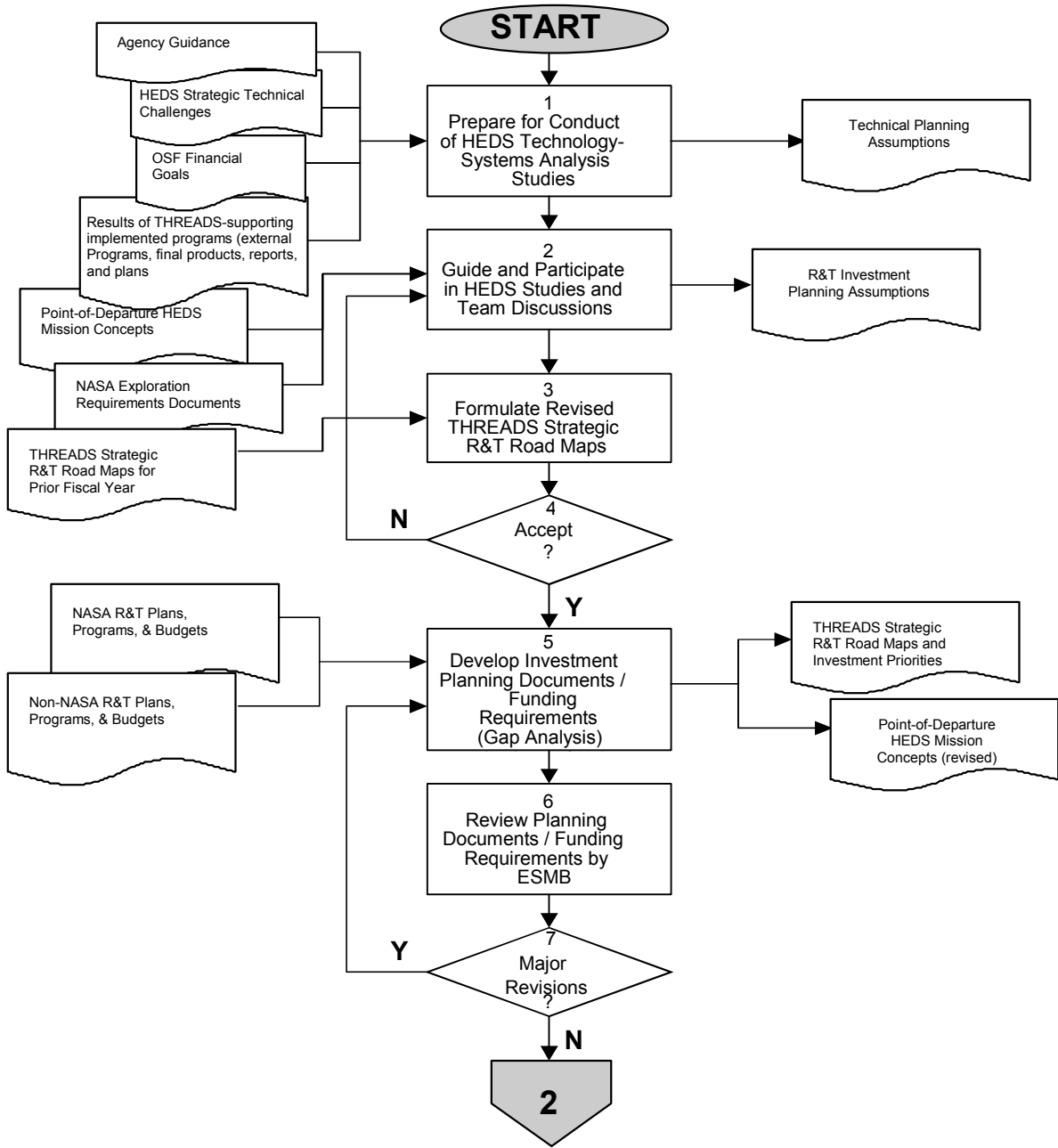
Chief Technologist for HEDS responsible for this process.

4.0 REFERENCES

NASA Strategic Plan	NPD 1000.1
HEDS Strategic Plan	Latest Revision
Technology for Human/Robotic Exploration and Development of Space Road Maps Document	Latest Revision
Headquarters Quality System Manual	HQSM 1200.A.1

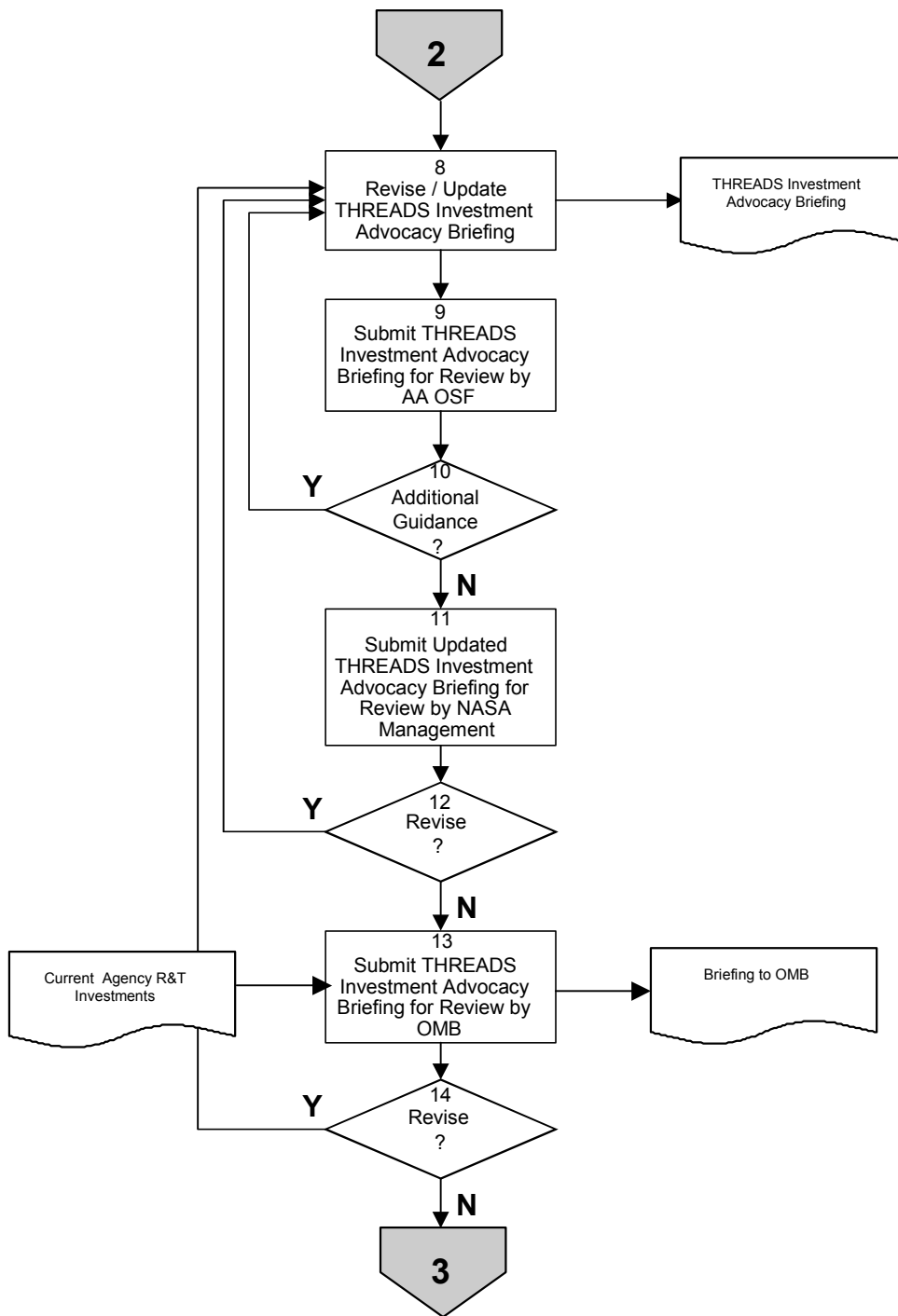
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5.0 FLOWCHART

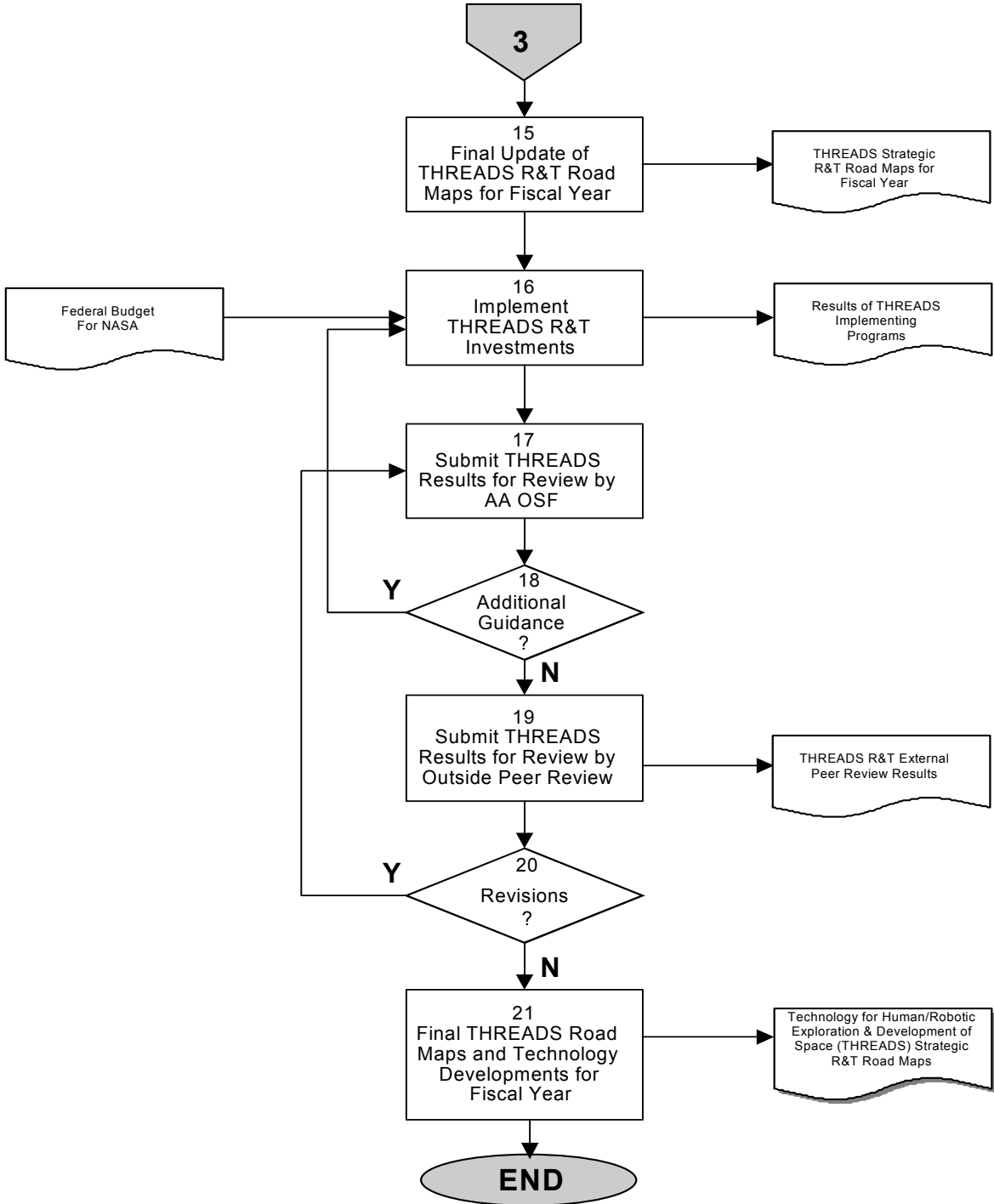


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6.0 HUMAN EXPLORATION AND DEVELOPMENT OF SPACE TECHNOLOGY PLANNING PROCESS STEPS

The planning process and budgeting for human exploration and development of space technologies is accomplished by the HEDS enterprise at NASA Headquarters. This process includes interaction with the NASA centers to develop the plans, priorities and budgets. The following table includes the reference to the process flowchart included in Section 5.0 of this document, the designated actionee responsible for each process action, and an explanation of the action required to progress the process to its completion.

<u>Actionee</u>	<u>Flowchart Reference</u>	<u>Action</u>
Code MP	1	Prepare for the conduct of Human Exploration and Development of Space (HEDS) supporting technology-systems analysis studies. This request is forwarded to various NASA centers, specifying the planning assumptions to be used in conducting studies and identifying requirements.
Code MP	2	Guide and participate, with the NASA Centers, in HEDS systems analysis and mission studies and discussions to formulate mission concepts, advanced systems concepts and technology needs.
Code MP	3	Formulate revised edition of the THREADS Strategic Research and Technology Road Maps, based on results for technology-systems analysis and mission studies, including updates to the THREADS work breakdown structure, strategic schedules of milestones and detailed technology planning content.
Code MP	4	If revisions are not accepted, return to Activity Step 2.
Code MP	5	Develop, using inputs from various organizations, THREADS investment planning documents and funding requirements, including a "gap analysis" based on related R&T planning by various NASA and non-NASA organizations, and prioritization of elements. Organizations from whom information is expected to be obtained include Code B and other NASA Enterprises. Results to include updates of technology options for future mission studies and planning.
Code MP	6	Revised THREADS strategic research and technology road maps, planning documents and funding requirements with the Exploration Senior Management Board.

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| Code MP | 7 | If major revisions are necessary, return to Activity Step 5. |
| Code MP | 8 | Develop and/or update needed THREADS investment advocacy briefing materials for internal HEDS review. |
| Code MP | 9 | Present updated THREADS road maps and investment advocacy briefing materials to the Associate Administrator for the Office of Space Flight. Review and compare current and planned Agency R&T investments with needs (as documented in THREADS road maps) |
| Code MP | 10 | If additional guidance is needed, return to Activity Step 8. |
| Code MP | 11 | Present updated THREADS road maps and investment advocacy briefing materials to Agency Senior Management (e.g., CIC, Code B). Review and compare current and planned Agency R&T investments with needs (as documented in THREADS road maps) |
| Code MP | 12 | If revisions are necessary, return to Activity Step 8. |
| Code MP | 13 | Submit updated THREADS road maps and investment advocacy briefing materials to the Office of Management and Budget (OMB). Review and compare current and planned Agency R&T investments with needs (as documented in THREADS road maps) |
| Code MP | 14 | If revisions are necessary, return to Activity Step 8. |
| Code MP | 15 | Final Update THREADS of strategic research and technology road maps for Fiscal Year |
| Code MP | 16 | In line with the approved updates to the THREADS strategic research and technology road maps, implement or refocus needed/prioritized research and technology investments—in partnership with the several NASA field centers, industry and universities. |
| Code MP | 17 | Submit THREADS research and technology investment results from previous year(s) for review by and discussion with the HEDS/OSF Associate Administrator. |

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- Code MP 18 If additional guidance is needed, return to Activity Step16.
- Code MP 19 Submit THREADS research and technology investment results for review by and discussion with independent outside review panels. These may include the national research council, or other groups.
- Code MP 20 If more revisions are needed, return to Activity Step 17.
- Code MP 21 Complete final THREADS plans and reports for Fiscal Year

7.0 RECORDS

RECORD IDENTIFICATION	OWNER	LOCATION	RECORD MEDIA: ELECTRONIC OR HARD COPY	SCHEDULE NUMBER AND ITEM NUMBER	RETENTION/DISP
Technology for Human/Robotic Exploration and Development of Space (THREADS) Strategic R&T Road Maps. This may include the following: -R & D Strategy -Gap Analysis -Applications Assessment -Prioritization	MP	MP	Hardcopy	Schedule 8 Item 13	Permanent. Retire to FRC on completion or abandonment of study