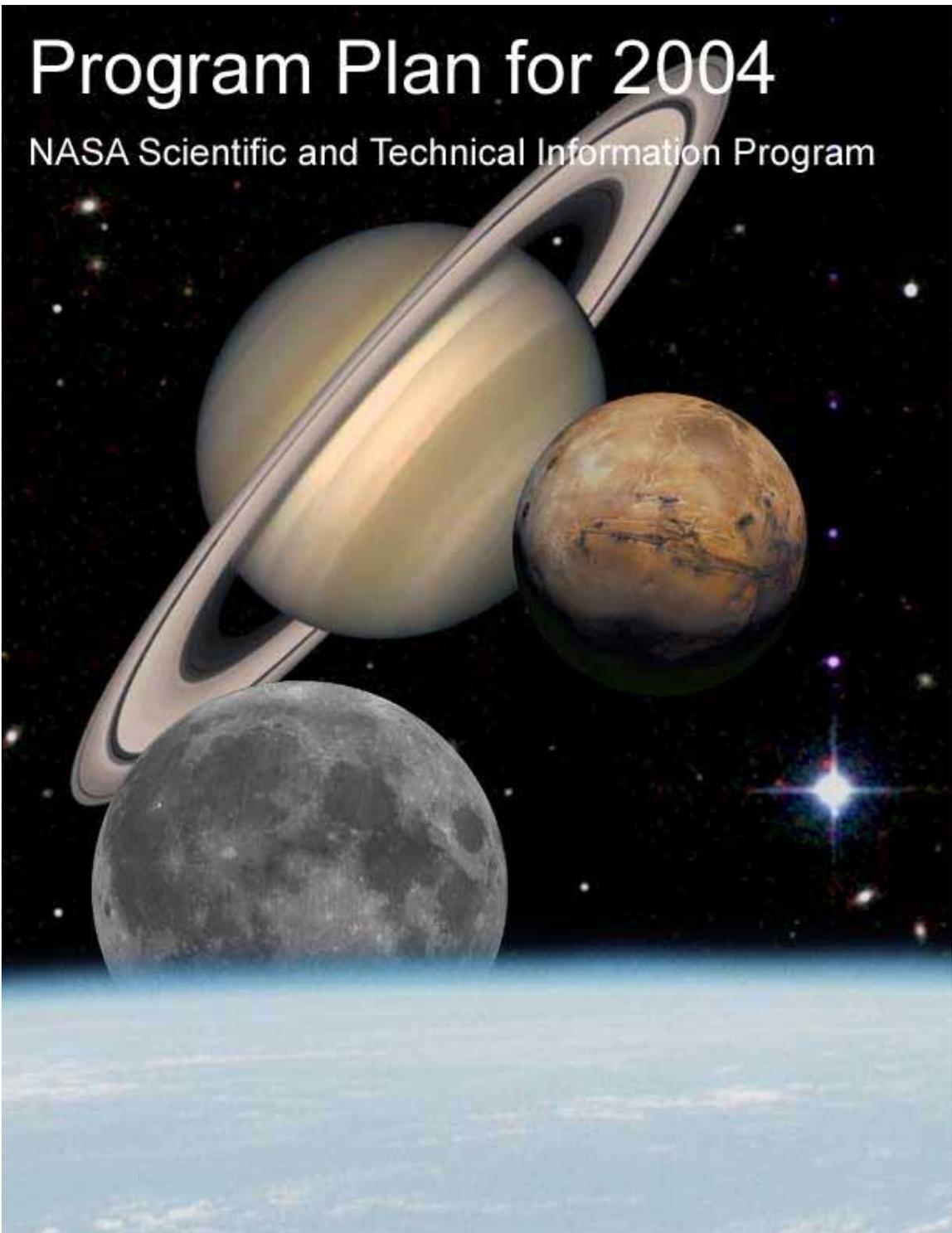


Program Plan for 2004

NASA Scientific and Technical Information Program



STI Program Office

<http://www.sti.nasa.gov/>



Program Plan for 2004

NASA Scientific and Technical Information Program

“NASA will ...Develop the innovative technologies, knowledge, and infrastructures both to explore and to support decisions about the destinations for human exploration; and Promote international and commercial participation in exploration to further U.S. scientific, security, and economic interests.” Excerpt from “Vision Goals,” Statement by Sean O’Keefe before the Committee on Commerce, Science, and Transportation United States Senate January 28, 2004

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NASA Chief Information Officer's Comments

Throughout 2004 and beyond, NASA will be faced with great challenges and even greater opportunities. Following a period of reevaluation and reinvention, we will move rapidly forward to leverage new partnerships, approaches, and technologies that will enhance the way we do business.

NASA's Scientific and Technical Information (STI) Program, which functions under the auspices of the Agency's Chief Information Officer (CIO), is an integral part of NASA's future. The program supports the Agency's missions to communicate scientific knowledge and understanding and to help transfer NASA's research and development (R&D) information to the aerospace and academic communities.

The STI Program helps ensure that the Agency will remain at the leading edge of R&D by quickly and efficiently capturing NASA and worldwide STI to use for problem solving, awareness, and knowledge management and transfer. The acquisition, use, and dissemination of STI, therefore, are essential not only to the Agency but also to the Nation's economic competitiveness.

As NASA improves our information technology infrastructure and forges ahead with new proven technologies to facilitate information flow, we must, in tandem, effectively manage and coordinate our information content to leverage its full power for effective communication and decision making. This is an exciting challenge, and one in which the NASA office of the CIO is uniquely designed and organized to accomplish.

This *Program Plan for 2004* describes the STI Program, its customers and future directions, and why the program is essential to NASA, the Nation, and the international scientific and technical communities.

The *Program Plan* was originally developed following an Agency-wide STI reengineering effort that assessed the program from the customer and the stakeholder (those with vested interests in the program) viewpoints. Customers, stakeholders, NASA Center and Agency personnel, and external partners participated in this assessment. The

Program Plan is updated on a yearly basis following analysis of feedback and realignment to NASA's missions and goals.

The STI Program looks forward to the challenges ahead, and we invite you to participate with us to continue to improve, leverage, and safeguard NASA's unique national resource and treasure in STI for today and generations to come.

As Wayne Hale wrote in "Adjusting Our Thinking," *Letter from Wayne Hale to the Space Shuttle Team, January 27, 2004*: "Write down what you have learned; pass it on to those who are starting to consider future designs. We must make sure that the next launch -- and landing -- and those that follow are safe and successful. That will be our finest contribution to the future, carrying the torch ahead."

Patricia Dunnington
NASA Chief Information Officer
NASA Headquarters, Code V



STI Program Overview

What It Is and Why It Is Essential to NASA and the Nation

The Scientific and Technical Information (STI) Program collects, organizes, manages, publishes, disseminates, and provides for long-term retention of NASA's research and development (R&D) information.

STI includes a variety of both formal peer-reviewed information (reports, journal articles, and conference proceedings) and other forms of informal ("gray") literature and knowledge (presentations, data sets, and documents in repositories).

The STI Program provides products and services to enable NASA's customers and stakeholders to quickly locate and leverage NASA's R&D and to keep abreast of national and international advances in science and engineering. Examples of products and services include:

- STI Database, which has 3.4 million citations and a growing number of full-text digital NASA documents
- Agency and public STI websites, which receive more than 200,000 and 3 million hits per month, respectively
- STI Help Desk, which helps customers locate and obtain NASA's information and handles approximately 600 inquiries per month
- Two interfaces to the STI Database:
 - NASA Aeronautics and Space Database (NA&SD), which came online in Fall of 2003 and serves NASA and its contractors and other Federal government agencies and their contractors
 - NASA Technical Report Server (NTRS), which is being expanded and upgraded for the inclusion of NASA's full-text documents and serves the public
 - These database interfaces receive approximately 42,000 (NA&SD) and 25,000 (NTRS) hits per month
- STI Program's Document Availability Authorization review process, which facilitates peer and data quality reviews and ensures that proprietary, restricted, and limited STI is correctly marked, handled, and disseminated

- Products, such as the machine-aided indexing tool, publications templates and guidance, purchases of commercial data for NASA, NASA video catalog, and STAR and SCAN (bibliographic alerts of STI)
- NASA Center for AeroSpace Information (CASI), NASA's STI contractor, which acquires, organizes, disseminates, and helps ensure that NASA's STI is both safeguarded and archived for long-term access; CASI maintains the STI Database for NASA

These are just a few examples of STI products and services that are provided to NASA's customers. These customers include:

- NASA personnel and NASA contractors and grantees
- Federal and other government agencies and their supporting personnel
- Universities and educational institutions
- Information partners
- Commercial entities
- Aerospace community
- Public

Examples of information partners include organizations such as the National Technical Information Service, Government Printing Office, National Archives and Records Administration, CENDI (association of U.S. Departments of Commerce, Energy, Defense, and Interior, and NASA), and private/university/government entities.

NASA's STI is an essential product of research, facilitates technology transfer and commercialization, and enhances the competitive edge of U.S. aerospace companies and educational institutions. NASA's STI is an integral part of the Agency's information transfer and is critical to NASA's mission and vital to the Nation. By ensuring a fast, two-way process of internal and external information exchange, the STI Program helps NASA avoid duplication of research, time, and cost and makes its wealth of information available to benefit its customers.

We in the STI Program promote an aggressive, cost-effective, and relevant Agency-wide STI Program--one that has strong ties to the information technology trends within and outside the Agency and is based on customer needs and partnership arrangements within NASA (e.g., Headquarters, NASA Centers, program offices, and customers) and outside the Agency. In addition, we continue to pursue a strong leadership position outside NASA in forming partnerships with other agencies and organizations to leverage cost-savings and efficiency benefits in identifying, publishing, archiving, and disseminating STI.

STI Defined

Scientific and Technical Information (STI) consists of the results (facts, analyses, and conclusions) of basic and applied scientific, technical, and related engineering research and development. STI also includes management, industry, and economic information relevant to this research.

In other words, STI is a collection of data (in any media format) that represents a body of scientific, technical, or management knowledge identified as having value to accomplish NASA's missions.

Examples of STI traditional products are research reports (STI Report Series), journal articles (preprints and reprints), conference proceedings, and presentations.

Other examples of STI include data sets, wind tunnel and satellite data, technical videos, scientific and technical imagery (photographs), on-line scientific bibliographic databases, and technical resource locators.

These products may also include laboratory notes, preliminary technical information (marked as such), lessons learned, scientific and technical operational information, and management information related to the operation of scientific and technical programs and projects.

Scope and Benefits of the STI Program

The STI Program supports the acquisition, organization, management, dissemination, and long-term retention and safeguarding of STI relevant to NASA's R & D and missions. The purpose of the NASA STI Program is to:

- Help ensure that NASA research is cost-effective by providing NASA personnel access to existing NASA and worldwide research results. In this way, the NASA STI Program reduces duplication and increases productivity, which not only increases the yield of the tax dollars invested in NASA research but also accelerates scientific progress.
- Support the work of the U.S. aerospace industries. To maintain their competitiveness, they rely on current knowledge of R & D developments in NASA, the United States, and the world.
- Share the results of NASA's research with the world, as appropriate.

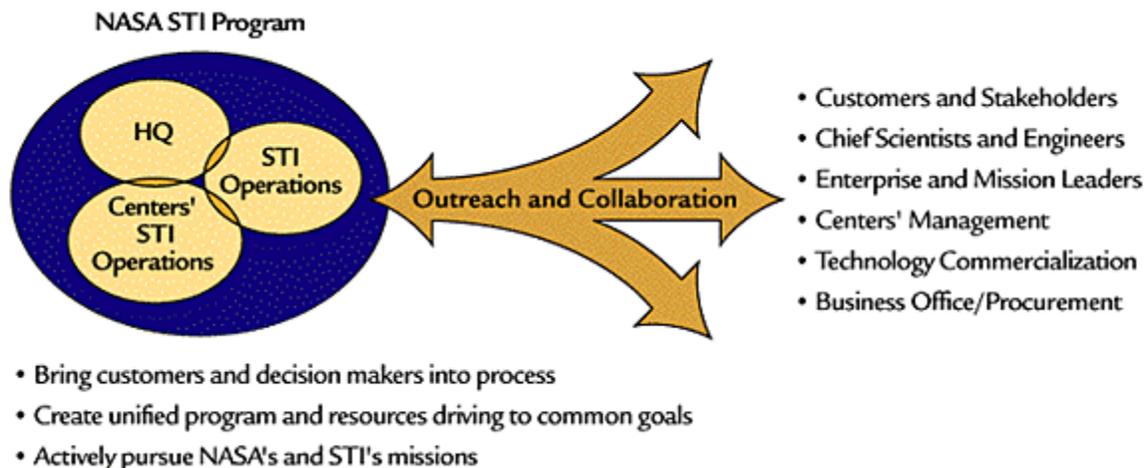
NASA's upcoming achievements in exploring the universe, the Moon and Mars, and the near-Earth and space environments beyond have and will continue to capture worldwide attention. The STI Program, under the auspices of NASA Headquarters and the STI Program Office at Langley Research Center, strives to link all aspects of STI content management for our customers and stakeholders benefit.

STI Program: An Integral Part of NASA's Information Infrastructure

NASA's R & D and missions produce a wealth of important STI that is essential to the Agency, U.S. aerospace companies and educational institutions, and the Nation. The STI Program is an integral part of gathering and disseminating this mission-related information. This program is not only part of NASA's information infrastructure but also is an important link in bringing the results of NASA's research to the Nation and its citizens.

We in the STI Program strongly believe in the need to share NASA's STI. We are excited about the future, and look forward proudly to the challenges and opportunities that lie ahead to serve the Agency and the Nation.

NASA STI Overview





Updates for 2004: **Improving the Way We Do Business**

Vision

Lead the Agency in capturing and organizing NASA's research and development aerospace information and disseminating it to every customer.

To support this vision, we affirm that we will:

- Partner with information technology and content providers both within NASA and externally to provide leadership and advances in acquiring, publishing, managing, disseminating, and safeguarding NASA's unique treasure of scientific and technical information
- Create virtual access to a broad array of STI, with a focus on full-text digital dissemination to the desktop
- Increase the amount and scope of STI that is made available to our customers and stakeholders
- Provide NASA and the U.S. aerospace community with prompt, convenient access to STI from NASA and global sources to support U.S. leadership in research and development

Mission

As the official STI broker for NASA, the STI Program will:

- Quickly, efficiently, and cost-effectively provide the NASA community with desktop access to STI produced by NASA and the world's aerospace community
- Provide the aerospace community and the general public access to the intellectual scientific and technical information output and achievements of NASA
- Collect, organize, and make available NASA, U.S. and worldwide STI pertinent to NASA's current and future missions

Goals

Throughout 2004 and into 2005, the STI Program will focus on these primary goals, which are to:

- Acquire, organize, and provide fast access to NASA and worldwide STI
 - Increase the amount of NASA STI that is made available
 - Increase the amount of nonNASA STI available to customers
 - Provide for the safeguarding of NASA's legacy and current collection of STI
- Become major component in E-Gov and E-NASA activities
 - Expand the collection of electronic documents
 - When possible and economical, provide these documents directly to the desktop in full-text format
- Form strategic partnerships to facilitate access to worldwide STI
- Become a leader in providing aerospace information

The STI Program will work toward the following secondary goals, which are to:

- Become a national model for providing STI
- Aggressively lead government agencies in partnership to collect and disseminate STI
- Help enhance the public's understanding of the assets that NASA's information provides to its customers and help educate them on how to locate this information

Objectives

The objectives of the STI Program are as follows:

- Provide access to wider variety of gray literature
- Upgrade or replace STI legacy systems
- Provide published and unpublished STI, such as technical report, gray literature, collaborative project documentation, and STI in document management repositories
- Accelerate acquisition of digitized STI
- Digitize legacy documents

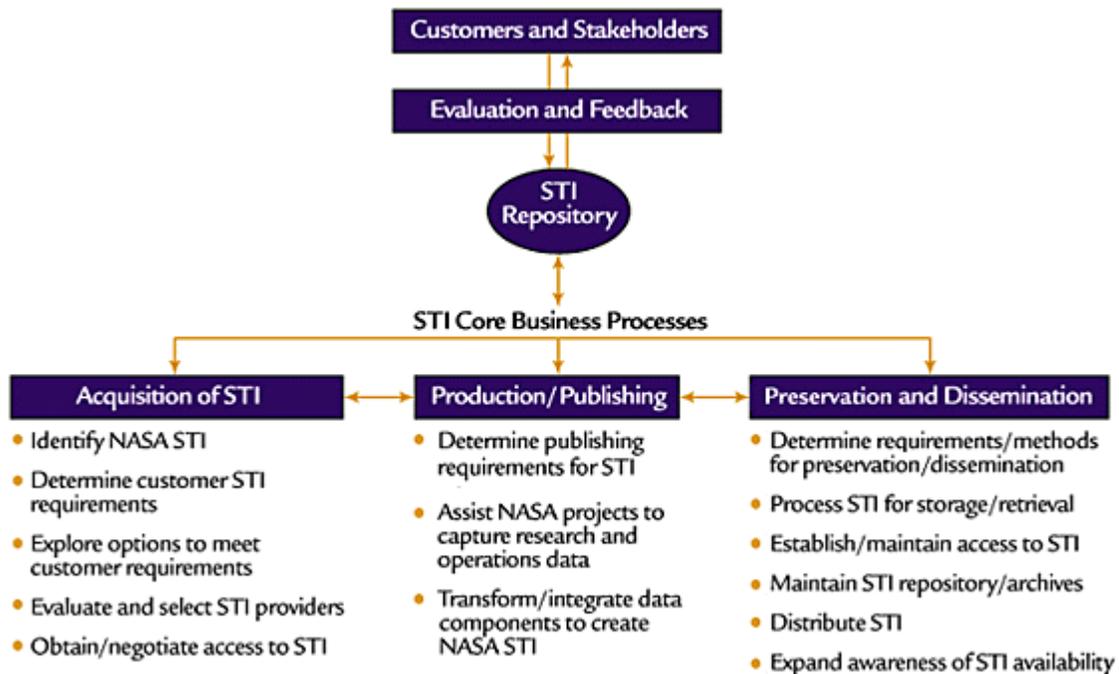
- Create a dynamic STI web presence within the E-NASA channels
- Provide standards and tools to increase interoperable, interactive, and instantaneous digitally formatted STI (machine-aided indexing, metadata standards, schema, taxonomies)
- Increase the infusion of worldwide STI through national and international collaboration

Operational Focus

The STI Program Office, in partnership with NASA Headquarters, the Centers, and other NASA organizations, customers, stakeholders, and suppliers will provide the following:

- Reduce the number of interfaces to the STI Database and improve their customer functionality
- Focus on providing full-text (as possible) STI digital formats to the desktop
- Customize products and services, based on user category
- Provide for the safeguarding of the legacy and current NASA collection
- Accelerate coordination at the Center level to ensure that NASA STI is acquired
- Use test beds and benchmarking to evaluate innovative ideas and "partner" with Centers that provide "best-in-class" services and products
- Focus on customer awareness and training to better leverage STI tools
- Ensure a coordinated and focused Agency approach that makes use of partnerships for Program implementation and best-in-class organizations and teaming arrangements
- Provide training and other guidelines to assist users locate, publish, and preserve NASA's STI, including proper handling of sensitive, restricted, and commercially sensitive STI

NASA STI Essential Business Processes



Approach and Organizational Structure

Our approach is to:

- Design and implement the STI Program based on customer and stakeholder needs within budgetary limitations
- Stress partnerships among NASA Headquarters, the STI Program Office at Langley, the Centers (both Center STI Programs and Center organizations that produce STI), and external government and industry STI organizations
- Use evaluation and metrics to improve program performance
- Move toward taking a leadership role in STI among other government agencies and industry

Agency-wide STI Program

NASA Headquarters is responsible for

- Planning and managing implementation of the Agency STI Program
- Assessing the effectiveness of the Agency STI Program
- Designating the NASA Headquarters STI Program Director, STI Manager, and the Document Availability Authorization representative for HQ
- Designating an STI Program Office (STIPO)
- Reviewing and approving the STIPO plan and implementation
- Approving the Memorandum of Understanding (MOU) with STIPO

The STIPO is responsible for the following activities, as documented in the signed MOU with NASA Headquarters Code V

- Recommending Agency STI policy to Headquarters
- Conducting domestic and international external STI liaison, including negotiating external STI agreements (in conjunction with and executed by the Office of External Relations)
- Operating and managing an efficient and cost-effective Agency-level program
- Advancing the state-of-the art in STI for NASA
- Coordinating the development of the unique STI capabilities of each NASA Center to strengthen the Agency STI Program
- Coordinating the development, operation, and maintenance of a virtual electronic research collection of NASA STI, including the operations of the STI contractor, NASA Center for AeroSpace Information
- Coordinating development of metrics in consultation with Headquarters
- Developing and maintaining a Headquarters-issued NASA NPD and NPR for STI
- Maintaining, organizing, and safeguarding the STI Database, which is a 3.4 million item (citation and some full-text NASA and other R&D documents) STI collection

STI Programs at NASA Centers

The NASA Centers are responsible for:

- Designating an STI Manager and a Document Availability Authorization representative at the Center, whose duties are specified in NPD 2200, for acquiring, tracking, and producing or having produced NASA STI related to their Center mission
- Ensuring that Center STI reaches the STI Database

- Sharing information, statistics, and recommendations, in addition to participating on Agency-wide teams, to improve the Agency-wide STI Program.

Other Organizations at NASA Centers

Identifying, tracking, and acquiring NASA's STI for the STI Database are not solely the responsibilities of the STI Program. Other NASA organizations have the responsibility to contact the STI Program at their Centers to determine how to get their project, mission, and organizational STI into the NASA STI Database. It is the responsibility of every NASA employee and NASA-funded contractor to ensure that NASA's STI is preserved for the Nation and its citizens.



Customers and Stakeholders

Customers and stakeholders of the STI Program are as follows:

Internal Customers and Stakeholders

- NASA and contractor engineers, scientists, and support staff
- NASA management
- NASA technology transfer and commercialization programs
- NASA Office of Education and Office of Public Affairs
- NASA Headquarters
- STI intermediaries (STI resource personnel)
- NASA Chief Information Officers

External Customers and Stakeholders

- Federal and other government agencies
- Universities and other Educational institutions
- Commercial STI providers
- General Public
- Foreign and domestic partners



Looking Toward NASA's and the Nation's Future Needs

The concepts listed below are critical to future STI growth and alignment:

- Information needs of NASA strategic vision and missions must be incorporated into the STI acquisition, preservation, and dissemination
- STI must focus on an aggressive but collaborative approach to effect change (which involves Centers' management, Chief Information Officers, enterprise and mission leaders, chief scientists and engineers, customers and key stakeholders, technology commercialization, and business office and procurement personnel)
- STI functions should be distributed to lowest level possible through a phased-in timeline
- STI should focus on a fully integrated, customer-focused electronic information services, including use of a segmented database; services will be provided to the desktop when feasible
- Business processes should focus on core areas and corresponding but simplified support processes (education of services and products, planning, metrics, standards, budget and resource management, training and education, STI tools and techniques, and communication and integration)
- Processes and knowledge of these processes must continue to exist to protect and include STI that is restricted, proprietary, or commercially sensitive so it is not blocked from the communities who need it

- STI exchange agreements must be monitored to ensure that there is a balance of STI exchange and that competitive worldwide information and translations are entering the database
- STI must proactively leverage partnerships within NASA and outside the Agency to achieve the STI Program goals
- Protection of the legacy and existing STI collections must be implemented and tested for improvement for disaster recovery, backup, off-site storage, and, when possible, fail-over or other safeguard existing technologies



Metrics To Measure Success

NASA will

- Increase the quantity of NASA STI collected and made available; Survey external STI databases and sources to identify STI for which the STI Program has not accounted, acquire it, and make it accessible
- Track the number of primary and secondary distributions or accesses of STI, including electronic searches (webpage accesses) to determine usage of its products and services
- Increase scanning of NASA collection, as resources allow
- Compare the subject matter requirements of users against STI access to global source (e.g., from other agencies, domestic sources, and international sources) in order to provide relevant information for NASA's missions and programs
- Analyze comments and questions received from users and user groups (NASA and its contractors and grantees and others, as permitted by law) regarding the timeliness of service and usefulness of its information

For additional information about this NASA STI Program Plan or the [NASA STI Program](#), contact the STI Program Office at Langley Research Center at email: <mailto:sti+id@larc.nasa.gov> , at fax number 757-864-7484, or at email: <mailto:g.j.roncaglia@larc.nasa.gov>.

Authoritative References:

- NASA NPD 2200, “Management of NASA Scientific and Technical Information (STI)”
- NPR 2200.2, “Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information (STI)”

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