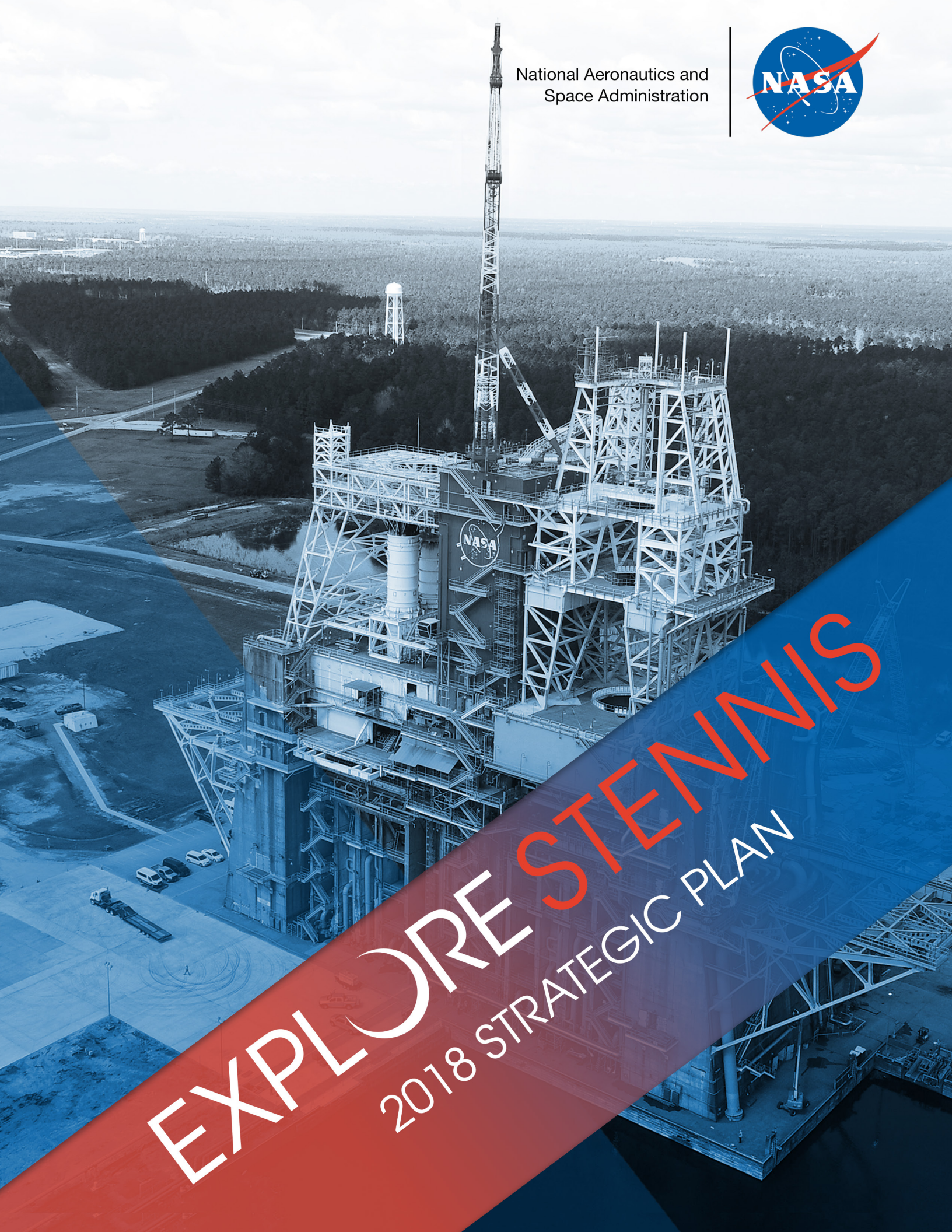
National Aeronautics and
Space Administration



EXPLORE STEMNIS

2018 STRATEGIC PLAN

I don't know yet what method we will use to get to the Moon, but I do know that we have to go through Mississippi to get there!

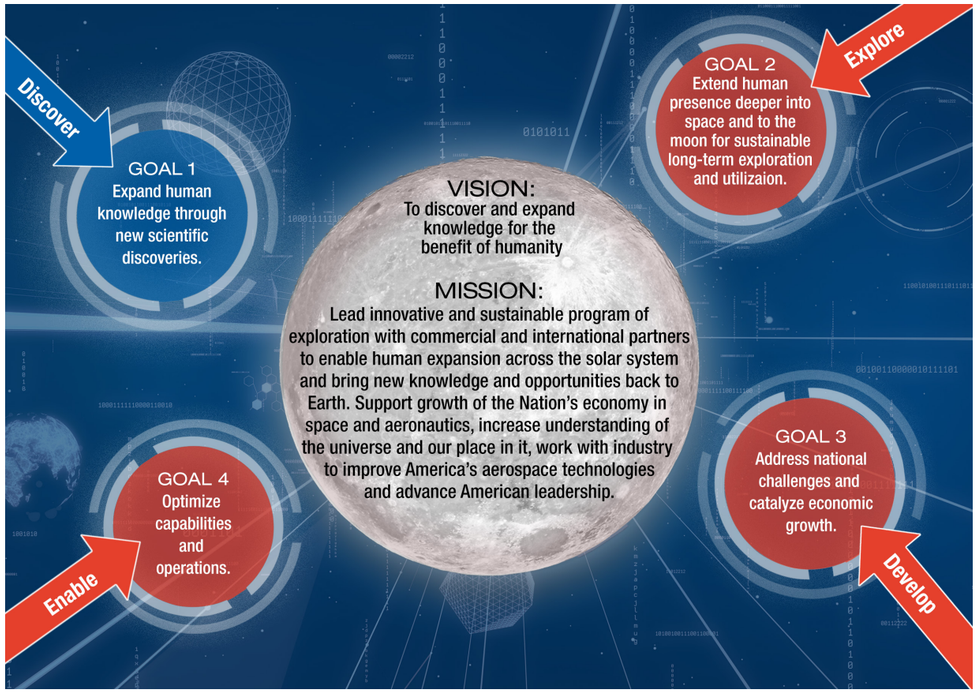
Wernher von Braun

For more than 50 years, since the early 1960s, John C. Stennis Space Center (SSC) has powered this nation's great space programs – testing the rocket engines and stages for Apollo and space shuttle missions. The center has grown into a sprawling federal city, enabling more than 50 resident agencies and partners to join in the NASA mission and to pursue their own endeavors as well. Stennis continues to play a central role in the future success of NASA. The following pages highlight the agency's mission, how Stennis fits in and the center's strategic plan for achieving its role. These are exciting times, and I hope you join us for the adventure.

Dr. Richard J. Gilbrech
Director, John C. Stennis Space Center

EXPLORE NASA

NASA's Vision, Mission & Goals



NASA has outlined clear mission goals for the future. Stennis Space Center supports all of the NASA goals but is closely tied to three (highlighted in red above). In addition to testing engines and rocket stages needed to expand the human presence in space, Stennis will work to grow and maximize as a federal city and as an economic and technological engine for south Mississippi and the nation.

When it comes to expanding the human presence in space, NASA is on the edge of a great new era in space exploration. In the years ahead, humans will travel farther into space than ever, returning to the Moon and traveling on to Mars. Stennis is at the forefront of that effort, testing the rocket engines and stages that will power NASA to reach its Humans in Space and Explore Moon to Mars goals.

EXPLORE STENNIS

NASA announced plans to establish Stennis Space Center in October 1961. Since then, the center has helped power every Apollo human mission to the Moon, as well as 135 space shuttle flights. It now is testing the engines and stages that will be used for deep space missions aboard NASA's new Space Launch System rocket.

VISION

Stennis Space Center leads Propulsion Testing and enables Partner mission success.

MISSION

Stennis Space Center is the partner of choice for providing propulsion test capabilities to the nation. Stennis utilizes its unique location and assets to collaborate with other agencies, academia, and industry to develop and test autonomous systems, enhance national security, and increase knowledge of the Earth and its oceans.

EXPLORE PROPULSION TESTING

STRATEGIC GOAL # 1

By 2025, Stennis Space Center will be home to a modern, sustainable propulsion test enterprise providing world class test services to NASA, other government agencies and commercial customers, as well as fostering an entrepreneur-friendly environment where commercial providers design, manufacture, assemble and test space launch hardware.






OBJECTIVES

1.1. Ensure mission success for NASA and other government agency test programs as a test service provider.

1.1.1. Sustain a flexible, experienced civil service and contractor workforce capable of providing exceptional rocket propulsion test services throughout the project lifecycle.

1.1.2. Maintain unique, world-class test facilities and infrastructure in a high state of readiness. Identify and prioritize capital investment projects for test stand and infrastructure refurbishment/replacement that provide capabilities required for rocket propulsion testing.

1.1.3. Create an environment that incorporates advanced technologies and innovative processes, at an acceptable risk, into the most demanding test programs to improve effectiveness and efficiency while maintaining sufficiently rigorous processes and practices required to support testing of NASA flight hardware.

1.2. Enable commercial propulsion providers in the large/medium launch vehicle market segment to locate at Stennis as long-term “anchor” tenants, ensuring the long-term viability of Stennis as a propulsion testing hub.

1.2.1. Develop and demonstrate flexible, industry-friendly business and test operations models, and implement the appropriate changes to policies, processes and procedures that encourage commercial propulsion providers to establish a permanent presence at Stennis.

1.2.2. Provide a range of opportunities across the entire value stream (design/manufacturing/assembly/test) to meet commercial provider needs (including timeliness), including government facilities, green field sites and Enterprise Park.

1.2.3. Strategically invest, and divest, in facilities to provide cost-effective, premier test capabilities at predictable and affordable costs required to support developing commercial space industry.

1.3. Sustain a robust, unique national capability for high-pressure component and subsystem development testing that will be available to government and commercial propulsion developers.

1.3.1. Strategically invest in high-pressure testing system capabilities and critical spares to provide customers with timely access to critical test facilities.

1.3.2. Maintain unique world-class high-pressure test facilities in a high-reliability state of readiness.

1.3.3. Establish a research-and-development operating model, including cost structure and safety oversight, for high-pressure component and subsystem development testing.

1.3.4. Evaluate options to establish common, well-defined interfaces to minimize specialized test equipment construction.

1.4. Enable capture of entrepreneurial small-scale or start-up propulsion providers’ business.

1.4.1. Develop and demonstrate flexible, industry-friendly business and test operations models that provide responsive test capabilities and services at reasonable, predictable costs for small-scale or start-up propulsion system customers.

1.4.2. Strategically invest in facilities, such as green field sites and agile test facilities, to provide cost-effective test capabilities required to support the developing small-scale and start-up space industry. Leverage these capabilities as a test bed to develop and test new technologies.

1.4.3. Divest excess facilities and make them available to commercial entities.

1.4.4. Establish a research-and-development operating model, including cost structure and safety oversight, for the commercial market segment. Tailor incident responses based on the inherent risks associated with research and development of novel propulsion systems.

1.5. Develop, demonstrate and deploy technologies that enhance the effectiveness and efficiency of the propulsion test mission.

1.5.1. Leverage agency (Space Technology Mission Directorate and Advanced Exploration Systems) technology investments, and technology transfer and regional economic development initiatives to capitalize on technology development opportunities that support rocket propulsion testing.

1.5.2. Complete the deployment of an enterprise electronic Product Data Lifecycle Management (PDLM) system incorporating model-based engineering, configuration management, work control and other functions in a fully integrated system.

1.5.3. Complete the integration of autonomous control and monitoring systems at test stands and test support systems. Incorporate intelligent, autonomous operations into the design of facilities and systems.

1.5.4. Employ data-driven decision making to optimize test services, base operations and business processes.

EXPLORE INNOVATION & PARTNERSHIPS

STRATEGIC GOAL # 2

Stennis Space Center will continue to provide an environment that enables efficient and effective support of NASA and tenant missions, while providing growth opportunities for development, test and operations of unmanned autonomous systems by NASA, other governmental agencies and industry.

OBJECTIVES

2.1. For the federal city, continue to improve a transparent business process that provides efficient and effective city services, provides a standard infrastructure condition to tenants at a predictable cost, reimburses NASA for costs of accommodating resident organizations and customers, and effectively integrates the mission needs of all resident organizations and customers.

2.1.1. Provide a flexible, cost-effective institutional base to enable success.

2.1.1.1. Understand and identify the future needs capabilities/services for the center and commercial customers, and transform the institutional facilities and infrastructure accordingly.

2.1.1.2. Research and analyze business cases for privatization/municipalization of horizontal infrastructure and medical/fire services.

2.1.1.3. Evaluate and modify the current rate structure for tenants (i.e. – demand vs. pool expenses, changes to per person structure, etc.) based on analysis of comprehensive databases specific to organizations, buildings and categories of services.

2.1.1.4. Understand and develop alternatives to current safety and security practices related to non-NASA facilities.

2.1.1.5. Develop a business case for integration of a working capital fund.

2.2. Create economic development opportunities that support the NASA mission and federal city tenant missions.

2.2.1. Mature the Enterprise Park concept to enable a better understanding of its possible effects on, or implications for, the federal city concept and make any necessary adjustments to either concept.

2.2.2. Develop partnership solutions for emerging economic development opportunities to define a set of options dependent on degree of tenant autonomy and the cost of services and support to be provided.

2.2.3. Facilitate access (short-term and long-term) to underutilized NASA land, infrastructure and airspace for potential partners, including design, manufacturing, assembly and test of propulsion systems and unmanned/autonomous systems.

2.3. Explore options beyond the status quo for federal city management.

2.3.1. Work with the General Services Administration and NASA Headquarters to explore ideas for construction of new NASA or tenant buildings and for the management and maintenance of tenant facilities at Stennis.

2.3.2. Explore possibility of transferring ownership of non-shared facilities to tenants – to include total responsibility for facility/area maintenance.

2.4. Leveraging Stennis' unique location, buffer zone, restricted airspace, partnerships and technical resources to attract and support the design, manufacture, test and operation of unmanned and autonomous air, ground and water vehicle systems.

2.4.1. Provide safe and effective range operations for expanded restricted airspace at Stennis.

2.4.2. Leverage NASA, U.S. Navy, academia and other tenant work on autonomous systems to become a premier autonomous system development, test and operations site across air/ground/marine environments.

2.4.3. Establish a Regional Unmanned Systems Working Group to promote collaboration in support of customers whose requirements cannot be accommodated by a single test site.

2.4.4. Integrate unmanned systems testing into the Stennis master planning process to enable use of the NASA-owned lands and the buffer zone easement for evolving hazardous test and evaluation operations while protecting the public, workforce, property and rocket propulsion test mission. Particular emphasis should be paid to identification and mitigation of encroachment from any source.

2.4.5. Implement command, control, communications and safety systems with the specific aim to balance cost to the customer with risk to the center and the public.

2.5. Sustain a flexible, experienced workforce that is agile, skilled and capable of providing exceptional mission support services that align with evolving mission needs.

www.nasa.gov/centers/stennis
www.nasa.gov