



It is a vital national imperative for the United States government to set our nation’s space program on an ambitious, yet sustainable, path. Only by reaching consensus on our long-term goals in space, and the short-term steps needed to achieve those goals, can our nation reap the enormous technological and economic benefits of space and maintain our competitive edge among nations.

The Space Exploration Alliance (the “SEA”) is today reaffirming its longstanding and unwavering commitment to further space exploration and development, by calling on the executive and legislative branches of government to reach consensus on a unified and comprehensive human and robotic spaceflight program, one that will allow our nation to fully utilize the now completed International Space Station (ISS) and also to conduct missions of exploration beyond Low Earth Orbit (LEO). Our nation’s leaders must continue to embrace the broad, bi-partisan support that led to the enactment of the NASA Authorization Act of 2010. Only by working together, and with NASA, can Congress and the Administration determine the best path forward relative to our civil space program. This includes (1) leveraging the necessary partnership between the public and private sectors relative to space exploration priorities and launch capabilities, (2) new uses of space to improve life on Earth, and (3) the utilization of the unparalleled expertise of our highly skilled work force. As Congress and the Administration continue to work together, the SEA urges that the following concepts form the cornerstone of our nation’s efforts going forward:

Space Flight Capabilities: It is critical that the next generation of launch vehicles be developed and/or human-rated at the earliest possible date. In the first instance, American access to LEO must be restored. In addition, production must also begin on launch vehicles that have sufficient lifting capacity that will enable NASA to mount, along with the necessary in-space infrastructure and transport vehicles, crewed missions beyond LEO. In addition, policies must be established that will

result in dramatically lower production, launch, and operating costs. The missions that these capabilities will be slated to accomplish must be identified, and sufficient funding must be provided to achieve those missions. The designs should be mission-enabling and mission-enhancing, while at the same time focused on efficiency, affordability, safety, reliability, and sustainability.

Private Sector: With the retirement of the Space Shuttle, and until new American capabilities come on line, the United States now has to rely on and pay for the Russian Soyuz for access to the International Space Station (the “ISS”). Instead of sending millions of dollars overseas to launch American astronauts into space, the SEA maintains that the commercial launch industry must be given full support in its efforts to restore American access to the ISS and our national laboratory in space. In addition to sending supplies to ISS, these commercial entities must also be permitted and encouraged to demonstrate that they are capable of sending crews safely to LEO as well. Commercial cargo/ crew access to Low Earth Orbit would not only provide for full utilization of the Space Station, but it will likely lead to significant reductions in launch costs. With the commercial launch industry providing this service, NASA would then be able to focus its attention and resources on exploration beyond LEO, which would provide NASA with a higher return on its science/ exploration budget.

Timelines and Goals: The SEA calls for Congress and the Administration to establish timelines and goals for future human space exploration activities. The SEA believes that



we should set a goal to send humans to at least one intermediate destination **beyond low Earth orbit, such as an asteroid or the Moon, within the next ten years, and for NASA to develop a plan to land humans on Mars by no later than 2030.** By doing so, the United States will continue to maintain its technological lead in space, rather than abrogating that role to other countries that today have active human spaceflight programs and that seek to supplant the U.S. as the world's premier space-faring nation.

Leadership in Space Science:

The funding for the 2016 and 2018 Exo-Mars missions planned jointly with our European partners must be restored. Our success in space science is without equal. Missions have included the recent Mars rovers, the **Cassini** probe to Saturn, the **Hubble Space Telescope**, and the **Mars Science Laboratory** now headed to Mars. We must not retreat from historic missions like these. Support for these missions, as well for the **James Webb Space Telescope**, will push the boundaries of knowledge and pave the way for human space exploration.

Advanced Technology, New Applications to Improve Life on Earth, and a Sustained Human Presence in Space:

The SEA calls for research and development of innovative and enabling technologies that will not only provide the means to explore and develop space, but also lead to the creation of new industries, markets, and jobs as well as to numerous and groundbreaking applications

that will improve life on Earth. The SEA calls for NASA to define and prioritize the most promising technology concepts to advance space exploration and development, such as **advanced propulsion, in-space refueling, energy production, and In Situ Resource Utilization (the utilization of indigenous resources on the Moon, asteroids, or Mars).** In addition, space debris, planetary defense, and a legal regime are among the issues that must be addressed now that many nations are venturing into space along with us.

Sustainability:

Our future path in space, if it is to succeed, requires a sustained, generational commitment to NASA's long-term mission, and certainly one that transcends partisan politics and election cycles. It also requires incentives to increase private sector and international partnerships. The SEA acknowledges the financial constraints under which the U.S. government will be operating over the next few years and believes that tax dollars should be spent wisely. We look forward to continuing to work with Congress and the Administration to guarantee that the United States remains the leader in space exploration and development. As we lead the way into the solar system, new American growth industries will be spawned, **our nation's youth will be inspired to pursue careers in math, science, and engineering, and our country's economy will be reinvigorated.** The United States must not allow itself to be left behind.

The Space Exploration Alliance is a partnership of the nation's premier non-profit space advocacy organizations, which collectively represent the voices of thousands of people throughout the United States and from all walks of life. The members of SEA believe that a strong and focused space exploration program is a compelling national priority that is technically and fiscally achievable, will inspire the nation's youth and the public, will reinvigorate the traditional aerospace workforce and industrial base, and will foster job-creating entrepreneurial activity across the entire economy.

For more information on the SEA, visit www.SpaceExplorationAlliance.org.