

NATIONAL SPACE COUNCIL



USERS' ADVISORY GROUP

AN INTRODUCTION

WHAT IS THE NATIONAL SPACE COUNCIL (NSpC)?

- An advisory body chaired by the Vice President consisting of several key Cabinet officials
- Previously existed from 1958-73, and 1989-93; reestablished on 6/30/2017

OBJECTIVE:

To coordinate U.S. national space policy across all relevant agencies and in all segments (civil, commercial, national security, international, etc.) and strengthen U.S. leadership in space

SUMMARY OF NSpC ACTIVITIES TO DATE

- **The NSpC has met six times. 2019 meetings to date:**
 - 3/26/2019 at the US Space & Rocket Center in Huntsville, AL
 - 8/20/2019 at Udvar-Hazy Center near Washington, DC
- **Issued three Space Policy Directives (SPDs):**
 - SPD 1(12/11/2017): Calls for U.S.-led integrated program with commercial partners to return humans to the Moon with missions to Mars and beyond to follow
 - SPD 2 (5/24/2018): Calls for regulatory reform for commercial launch and reentry, commercial remote sensing, and spectrum use
 - SPD 3 (6/18/2018): Directs the development of a national space traffic management policy to preserve the space environment for future use
 - SPD 4 (2/19/2019): Establishment of the United States Space Force
- **Directive to return US astronauts to the Moon by 2024, establish a sustainable presence, and prepare for Mars issued at March meeting**
- **Additional recommendations on LEO, lunar surface, Mars, international cooperation, and space nuclear power issued in August**



But our determination — our determination is to capture the imagination of the American people — of men and women, and boys and girls all across this country — and, really, to inspire the world.

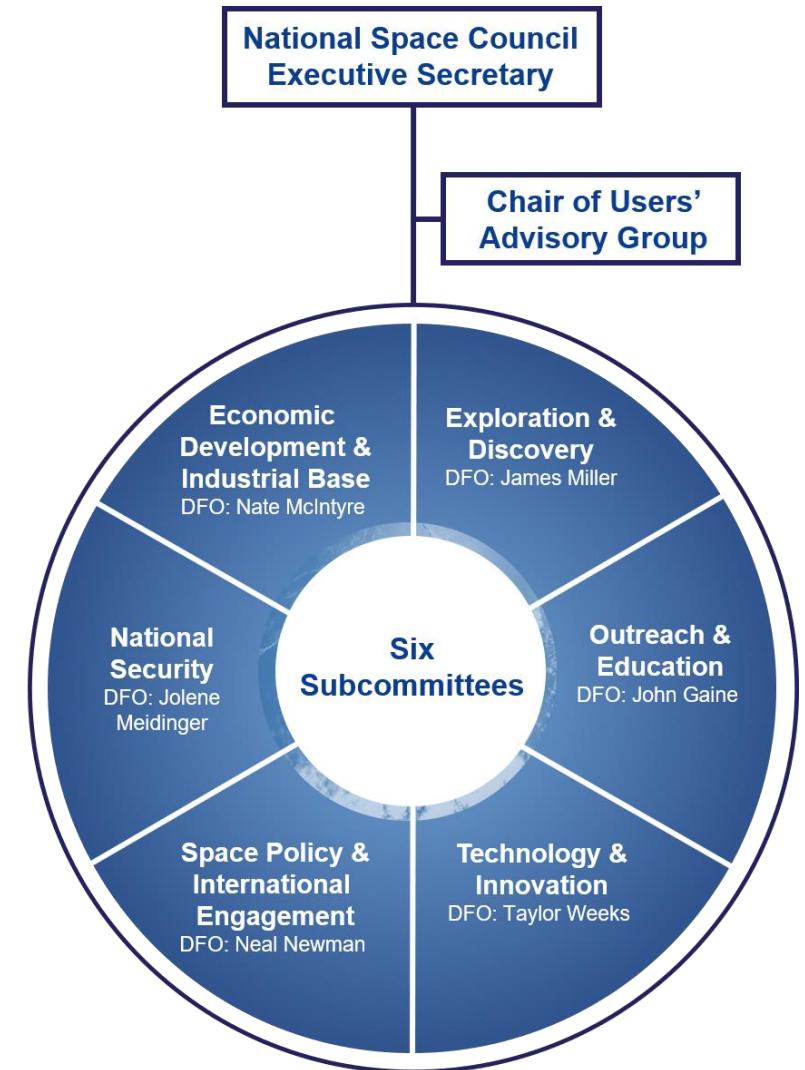


Vice President Mike Pence
Addressing the National Space Council
August 20, 2019



WHAT IS THE USERS' ADVISORY GROUP (UAG)?

- The UAG is a Federal Advisory Committee governed by the Federal Advisory Committee Act (FACA)
- Charter signed 12/6/2017 and runs for two years unless renewed
- Intended to be industry and other non-Federal stakeholders' voice to the White House National Space Council (NSpC)
- Tasked with advising the NSpC on any and all space policy issues relevant to these stakeholders
- Will meet 3-4 times annually; first meeting held 6/19/2018, last 10/21/2019



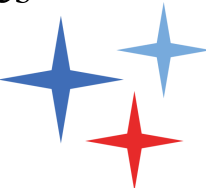
USERS' ADVISORY GROUP CHARTER: OBJECTIVES AND SCOPE

Charter up for renewal
with potential changes by
the end of 2019

The function of the UAG is solely advisory and shall be to ensure that the interests of industry, other non-Federal entities, and other persons involved in aeronautical and space activities are adequately represented.

The UAG shall provide advice and recommendations on matters including, but not limited to:

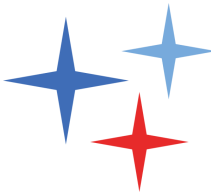
- The effect of existing and potential U.S. and foreign government policies, laws, regulations, treaties and other international instruments, programs and practices on national security, civil, and private sector space activities;
- National security space priorities, including those affecting Homeland Security, the Nation's defense, and intelligence activities, as they relate to coordination, cooperation, and technology and information exchange among the civil, national security, and commercial space sectors;
- Human and robotic exploration priorities;
- Strategies to increase innovation, efficiency, and effectiveness in public and private space activities that benefit the American people and reduce the burden on the taxpayer;
- Strategies to increase public, academic, commercial, and international support for U.S. space policies and programs; and
- Strategies to ensure U.S. leadership in the economic development of outer space.





The UAG's duties shall include, but are not limited to:

- Seek to ensure that the interests of industry, other non-Federal entities and other persons involved in aeronautical and space activities are adequately represented on the National Space Council;
- Provide subject matter expertise to the council;
- Submit reports with findings and recommendations to the Council;
- Conduct studies, reviews, and evaluations, as requested by the Council;
- and Submit an annual report to the Council on its activities, as requested by the Council.



UAG SUBCOMMITTEE MEMBERSHIP

ECONOMIC DEVELOPMENT AND INDUSTRIAL BASE

Dr. Mary Lynne Dittmar, Co-Chair
Eric Stallmer, Co-Chair

Tory Bruno
Steve Crisafulli
Tim Ellis
Homer Hickam
Fred Klipsch
Gwynne Shotwell
Dr. Bob Smith
David Thompson
Stuart Witt

EXPLORATION AND DISCOVERY

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Col. Buzz Aldrin (USAF, Ret.)
Tory Bruno
Dr. Mary Lynne Dittmar
Marillyn Hewson
Homer Hickam
The Hon. Kay Ivey
Dennis Muilenburg
Fatih Ozmen
Gwynne Shotwell
Eric Stallmer
David Thompson
Pamela Vaughan
Kathy Warden
Stuart Witt

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Marillyn Hewson
Gen. Lester Lyles (USAF, Ret.)
Col. Pamela Melroy (USAF, Ret.)
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Fatih Ozmen
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Harrison Schmitt
Gwynne Shotwell
Dr. Bob Smith
Mandy Vaughn
Kathy Warden
Stuart Witt

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Homer Hickam
Fred Klipsch
Pamela Vaughan
Mandy Vaughn
Stuart Witt

SPACE POLICY AND INTERNATIONAL ENGAGEMENT

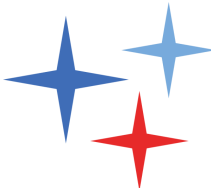
Dr. David Wolf, Chair

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Dean Cheng
Dr. Mary Lynne Dittmar
Adm. James Ellis, Jr. (USN, Ret.)
Homer Hickam
Fred Klipsch
Col. Pamela Melroy (USAF, Ret.)
Dennis Muilenburg
Eric Stallmer

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Eric Schmidt
Harrison Schmitt
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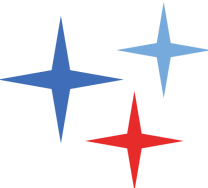


SUBCOMMITTEE WORK

Broad remit in assigned areas; examples of current topics being explored: LEO economic development, SSA/STM, STEM workforce development

Subcommittees also given five tasks to prioritize by the VP:

1. Review current lunar exploration architecture and identify any areas for improvement.
2. Assess and recommend options for the organizational structure of the uniformed Space Force.
3. Provide findings and recommendations on how the United States can most effectively continue to lead international space efforts.
4. Prioritize technologies necessary for sustainable lunar exploration and that feed forward to Mars exploration. Including potential National Academies roadmap update.
5. Review the Department of Commerce's report on spectrum management and improving the competitiveness of the U.S. space sector. Make recommendations for implementation and improvement of U.S. competitiveness.



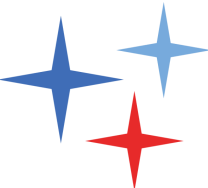
LATEST UAG RECOMMENDATIONS (10/21/2019)

1. The NSpC should write a Space Policy Directive concerning STEM education in the United States (U.S.) with the intent to prepare the future space industry workforce.
2. The NSpC should direct the UAG to develop a white paper, outlining and scoping a study of the means to establish and maintain a U.S. Strategic Space Propellant Reserve modeled on the U.S. Strategic Petroleum Reserve (SPR). The white paper should identify variables important to establish reference requirements, such as: (a) the size and location of initial reserves needed to stimulate sufficient infrastructure to support an eventual \$1T space economy; (b) technical means; (c) identification of markets that could be enabled; and (d) models for funding, and others. It is anticipated that a detailed study undertaken by the National Academies of Sciences, Engineering and Medicine would follow initial scoping by the UAG.



LATEST UAG RECOMMENDATIONS (10/21/2019)

3. The NSpC should direct the UAG to define the scope of a study to be conducted by the National Academy of Public Administration, reviewing U.S. regulatory jurisdiction and governance (domestic) v. a goal of technology leadership across spectrum related technology sectors. The study should also address an assessment of the current U.S. governance model for spectrum v. alignment with multiple national technological leadership and capabilities priorities.
4. NASA should update their technology roadmap and brief the UAG in light of the Artemis and Moon and to Mars program, provide a briefing to the UAG and, if necessary, fund a brief external review. [Note: (1) the roadmap does not need to also be published; and (2) we don't need roadmap across entire NASA enterprise, just key technologies for Artemis and going onto Mars.]

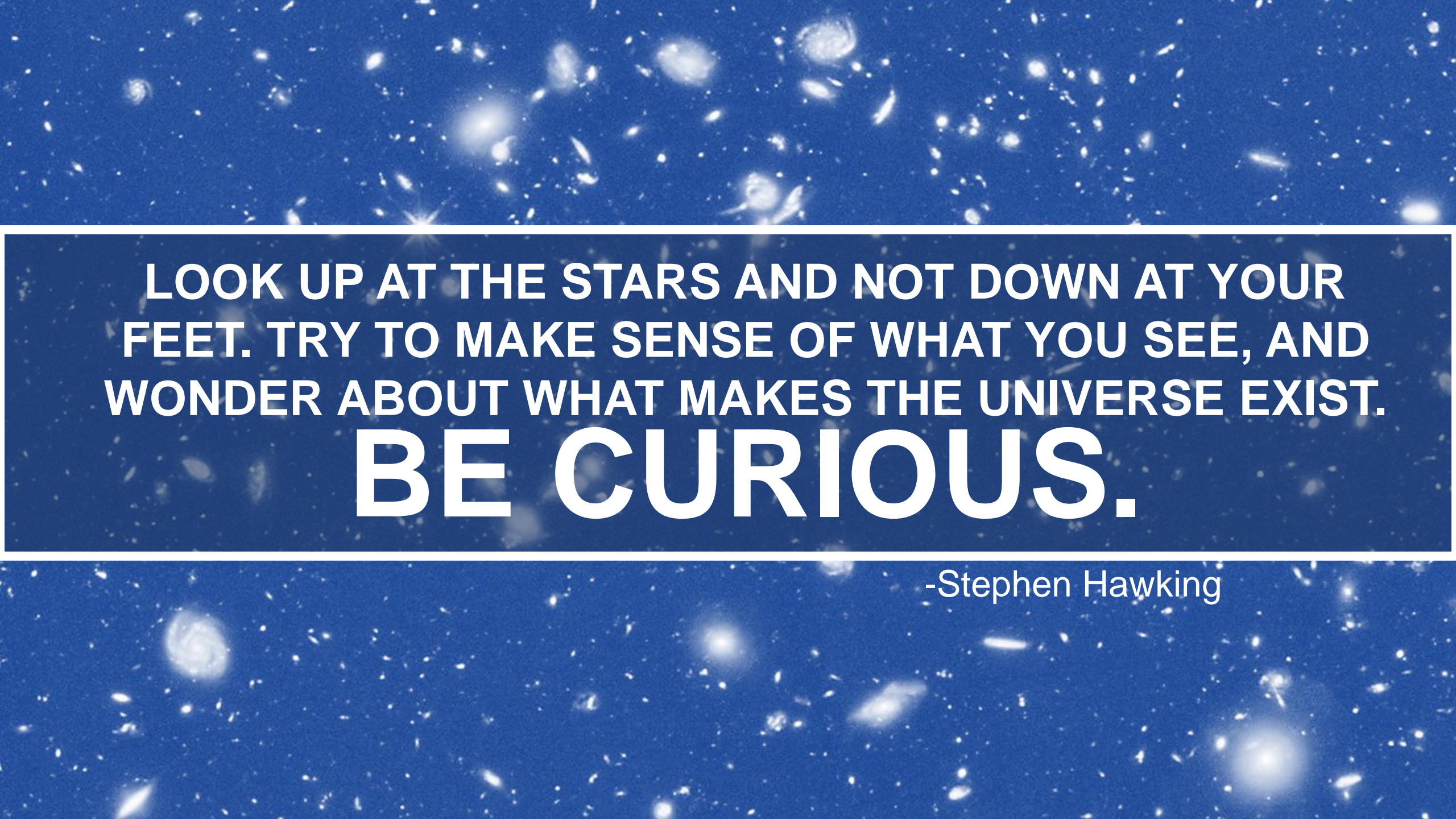




WE WANT TO IMPROVE

Submit your inputs to:
hq-uag@mail.nasa.gov

- What new partnership constructs should we look at?
- Future areas of exploration and scientific research
- Bureaucratic and regulatory hurdles that need attention
- Innovative technologies with potential space applications
- Big ideas for advancing American leadership in space



**LOOK UP AT THE STARS AND NOT DOWN AT YOUR
FEET. TRY TO MAKE SENSE OF WHAT YOU SEE, AND
WONDER ABOUT WHAT MAKES THE UNIVERSE EXIST.
BE CURIOUS.**

-Stephen Hawking