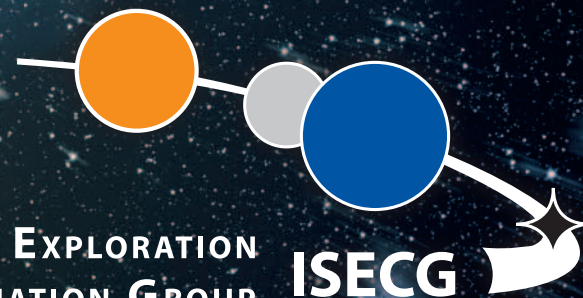


# EXPLORING TOGETHER

INTERNATIONAL SPACE EXPLORATION  
COORDINATION GROUP



**ISECG**

**ISECG** is the international forum set up by 14 space agencies to advance the Global Exploration Strategy through coordination of their mutual efforts in space exploration



*‘Earth is the cradle of the mind,  
but one cannot live in the cradle forever’*

Konstantin E. Tsiolkovsky, 1857–1935

# 人類による太陽系探査

Gemeinsam unser Sonnensystem  
erkunden und erschließen

Досліджуємо разом

**SPACE EXPLORATION** enriches and strengthens humanity's future. Searching for answers to fundamental questions such as: 'Where do we come from?' 'What is our place in the universe?' and 'What is our destiny?' can bring nations together in a common cause, reveal new knowledge, inspire young people and stimulate technical and commercial innovation on Earth.

**The Global Exploration Strategy is the key to delivering these benefits.**

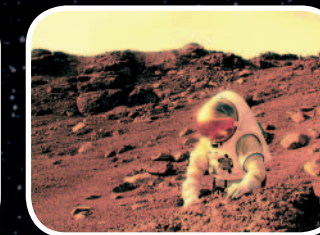
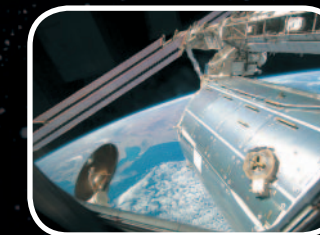
*The Global Exploration Strategy: The Framework for Coordination* was agreed and published in May 2007 by fourteen space agencies. It presents a vision for robotic and human space exploration, focusing on destinations within the solar system where humans may one day live and work.

This reflects a determination to explore our nearest companions – the Moon, Mars and some nearby asteroids. The goal is not a few quick visits, but rather a sustained and ultimately self-sufficient human presence beyond Earth supported by robotic pathfinders.

Sustainable space exploration is a challenge that no one nation can do on its own. Therefore, we will strengthen international partnerships through sharing challenging and peaceful goals.

**The Global Exploration Strategy identifies five themes through which space exploration may serve society:**

1. New knowledge in science and technology
2. A sustained presence – extending human frontiers
3. Economic expansion
4. A global partnership
5. Inspiration and education





*‘Man must rise above the Earth  
– to the top of the atmosphere and beyond –  
for only thus will he fully understand the world  
in which he lives.’*

Socrates, 470–399 BC

International cooperation expands the breadth of what any one nation can do on its own... It is important to establish and sustain practical mechanisms to support exploration if humanity is to succeed in implementing long-term space exploration on a global scale.

The Global Exploration Strategy

**THE PURPOSE** of ISECG is to advance the Global Exploration Strategy by providing a forum where interested agencies can share their objectives and plans, and explore concepts that make use of synergies. ISECG operates in accordance with the key principles set out in the Global Exploration Strategy – that it should be open and inclusive, flexible and evolutionary, effective, and take account of mutual interests. **ISECG is committed to the development of products that enable participating agencies to take concrete steps towards partnerships that reflect a globally coordinated exploration effort.**

**The members of ISECG are:** ASI (Italy), CNES (France), CNSA (China), CSA (Canada), CSIRO (Australia), DLR (Germany), ESA (Europe), ISRO (India), JAXA (Japan), KARI (South Korea), NASA (United States), NSAU (Ukraine), Roscosmos (Russia), UKSA (United Kingdom).



अन्वेषण साथ-साथ  
explorer ensemble  
共同探索太阳系





For the foreseeable future, the Moon, Mars and near-Earth asteroids are the primary targets for human space exploration.

The Global Exploration Strategy

ISECG REFERENCE ARCHITECTURE FOR HUMAN LUNAR EXPLORATION

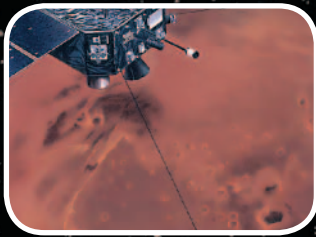
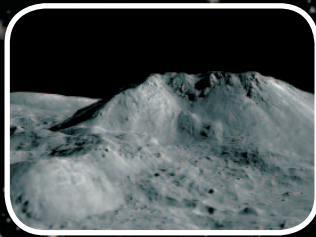
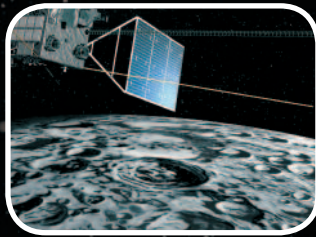
In 2008, several agencies planning lunar exploration activities identified a mutual interest in exploring opportunities for coordination. Through ISECG, participating agencies conducted a study of lunar exploration concepts that could best address their common goals. The result was the **ISECG Reference Architecture for Human Lunar Exploration** – a conceptual description of a series of elements delivered to the lunar surface over time together with a concept of operations that utilizes these elements to address these goals. It demonstrated the synergistic use of both humans and robots. The reference architecture informs near-term decision-making by individual agencies in areas such as priorities for interface standardization, technology investments, and robotic precursor missions.

While pioneered for lunar exploration, this study serves as a useful model for designing multilateral architectures to explore Mars and other destinations in the solar system. The Reference Architecture demonstrates the importance of agencies working together early in program formulation to maximize opportunities for partnerships. To learn more about the ISECG Reference Architecture for Human Lunar Exploration please see the ISECG website.

ISECG GLOBAL EXPLORATION ROADMAP

Senior agency managers representing agencies contributing to ISECG have agreed to start the development of a Global Exploration Roadmap, recognizing that such a roadmap will evolve and respond to new programmatic priorities, scientific discoveries and technological breakthroughs. The Global Exploration Roadmap will reflect exploration missions and activities planned and under consideration, which target the destinations where humans can hope to live and work. It is a tool that can facilitate agency consensus on key strategic issues essential for the build-up of a global partnership and realization of future human mission scenarios as envisioned in the Global Exploration Strategy. Participating agencies hope that the Global Exploration Roadmap can serve as an international reference framework to guide future planning by participating agencies.

Version 1 of the Global Exploration Roadmap will be available by mid 2011.







### Strengthening individual exploration programs as well as the collective effort

In 2006, 14 space agencies\* began a series of discussions on global interests in space exploration. Together they took the unprecedented step of elaborating a vision for peaceful robotic and human space exploration, focusing on destinations within the solar system where humans may one day live and work, and developed a common set of key space exploration themes. This vision was articulated in 'The Global Exploration Strategy: The Framework for Coordination', which was released on May 31, 2007. A key finding of this Framework Document was the need to establish a voluntary, non-binding international coordination mechanism through which individual agencies may exchange information regarding interests, objectives, and plans in space exploration with the goal of strengthening both individual exploration programs as well as the collective effort. The coordination mechanism is now called the INTERNATIONAL SPACE EXPLORATION COORDINATION GROUP (ISECG).

\* 'Space Agencies' refers to government organizations responsible for space activities.

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### Imprint

**Publisher:** INTERNATIONAL SPACE EXPLORATION COORDINATION GROUP (ISECG)  
**Editor:** Andrea Boese (DLR)  
**Scientific consultation by the ISECG Working Group on Enhancement of Public Engagement**  
**Design:** CD Werbeagentur GmbH, Troisdorf, Germany (www.cdonline.de)  
**Printing:** Druckerei Thierbach GmbH, Mülheim/Ruhr, Germany  
**Pictures:** ESA, JAXA, NASA



This publication has been produced by DLR German Aerospace Center for ISECG