

National Aeronautics and Space Administration



NASA's Human Path to Mars

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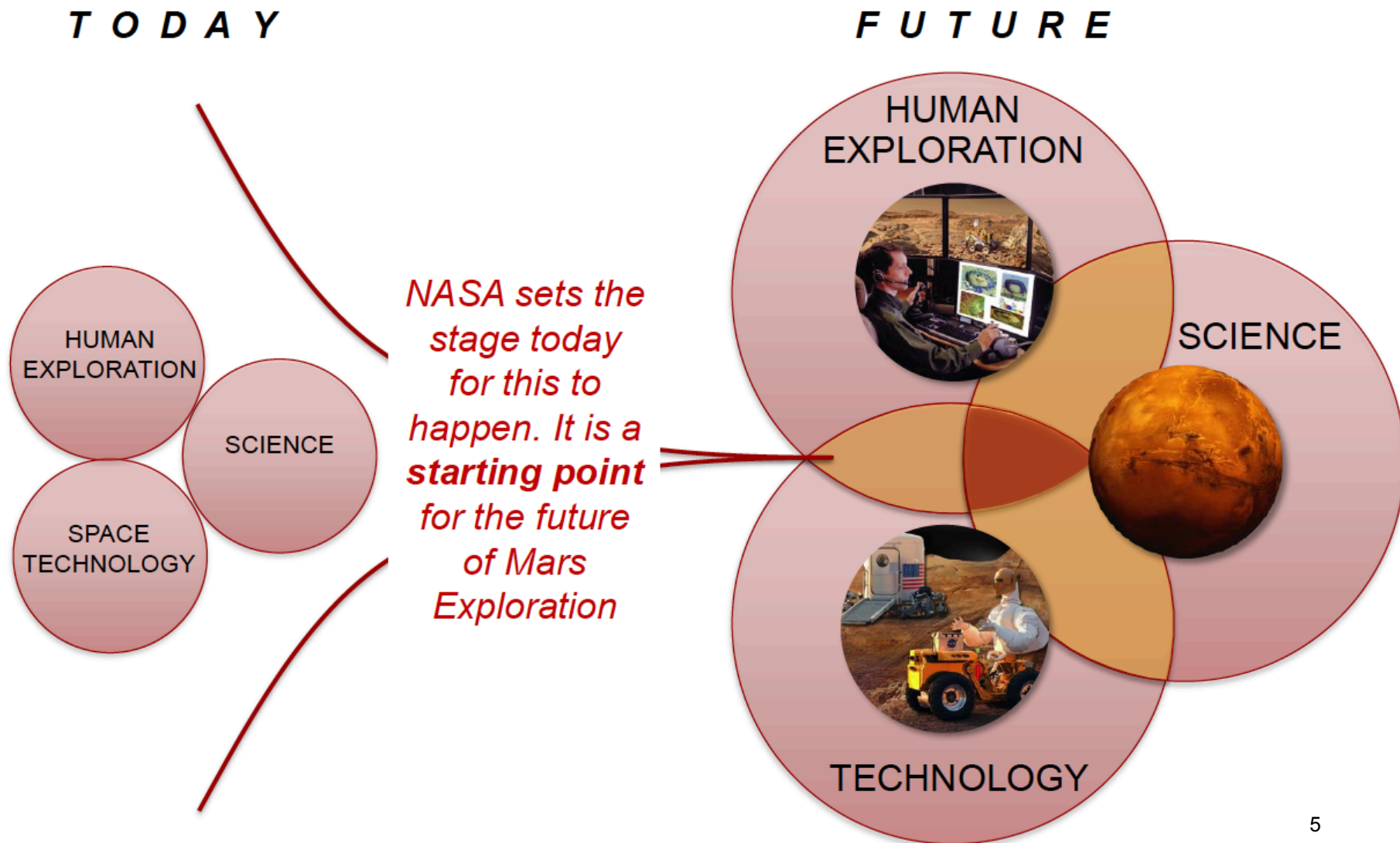


Why Human Space Exploration?

- **Scientific and human exploration and pioneering mark advancing civilizations and expand human experience**
 - Expands knowledge, fuels innovation, and spurs commerce
 - Requires risk acceptance
- **Exploration and pioneering leverages humanity's powerful motivations:**
 - Ignites our imaginations
 - Leads to discovery and science & technical advances
 - Creates a vision of a better future for the next generations
- **Space exploration is human and robotic explorers in partnership**
 - Robots explore distant and hazardous environments to extend scientific understanding and planning for human missions
 - Human explorers provide greater speed, intuitive ease, and efficiency
- **Human space exploration garners national prestige and unites nations around a common goal**

*Building on our investments in technology, robotic missions, International Space Station, Commercial Crew & Cargo, Space Launch System, and Orion, America is poised to lead the next wave of partnerships for international science and human space exploration*⁴

Vision Basis for Cross Cutting Mars Exploration



Global Exploration Roadmap



2013

2020

2030

International Space Station

General Research and Exploration
Preparatory Activities

Note: ISS partner agencies have agreed to use the ISS until at least 2020.

Commercial or Government Low-Earth Orbit Platforms and Missions

Robotic Missions to Discover and Prepare



Mars Sample
Return and
Precursor
Opportunities

Human Missions Beyond Low-Earth Orbit

Explore Near-Earth Asteroid

Extended Duration Crew
Missions

Humans to
Lunar Surface

Missions to
Deep Space and
Mars System

Sustainable
Human Missions
to Mars Surface

Multiple Locations
in the Lunar Vicinity

The Future of Human Space Exploration

NASA's Building Blocks to Mars

