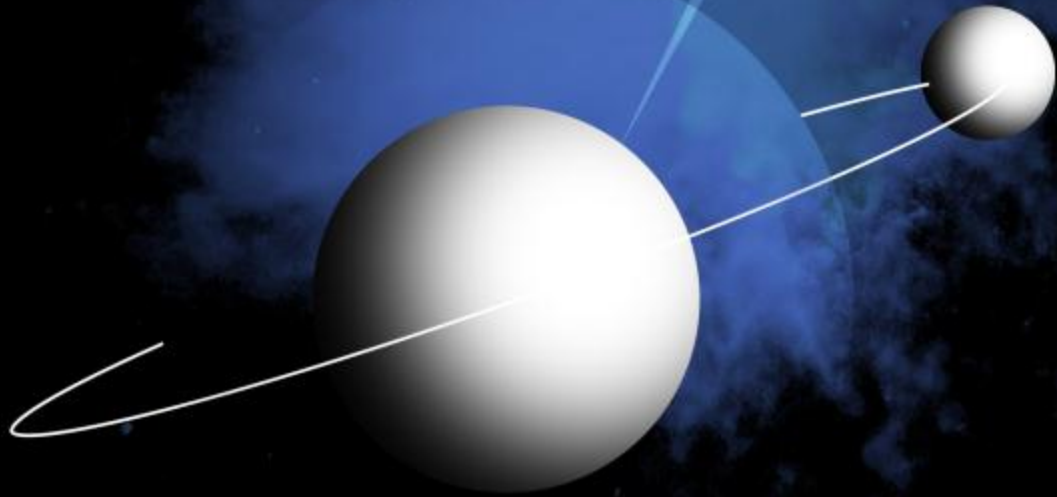




Space Launch System America's Flagship for Exploration

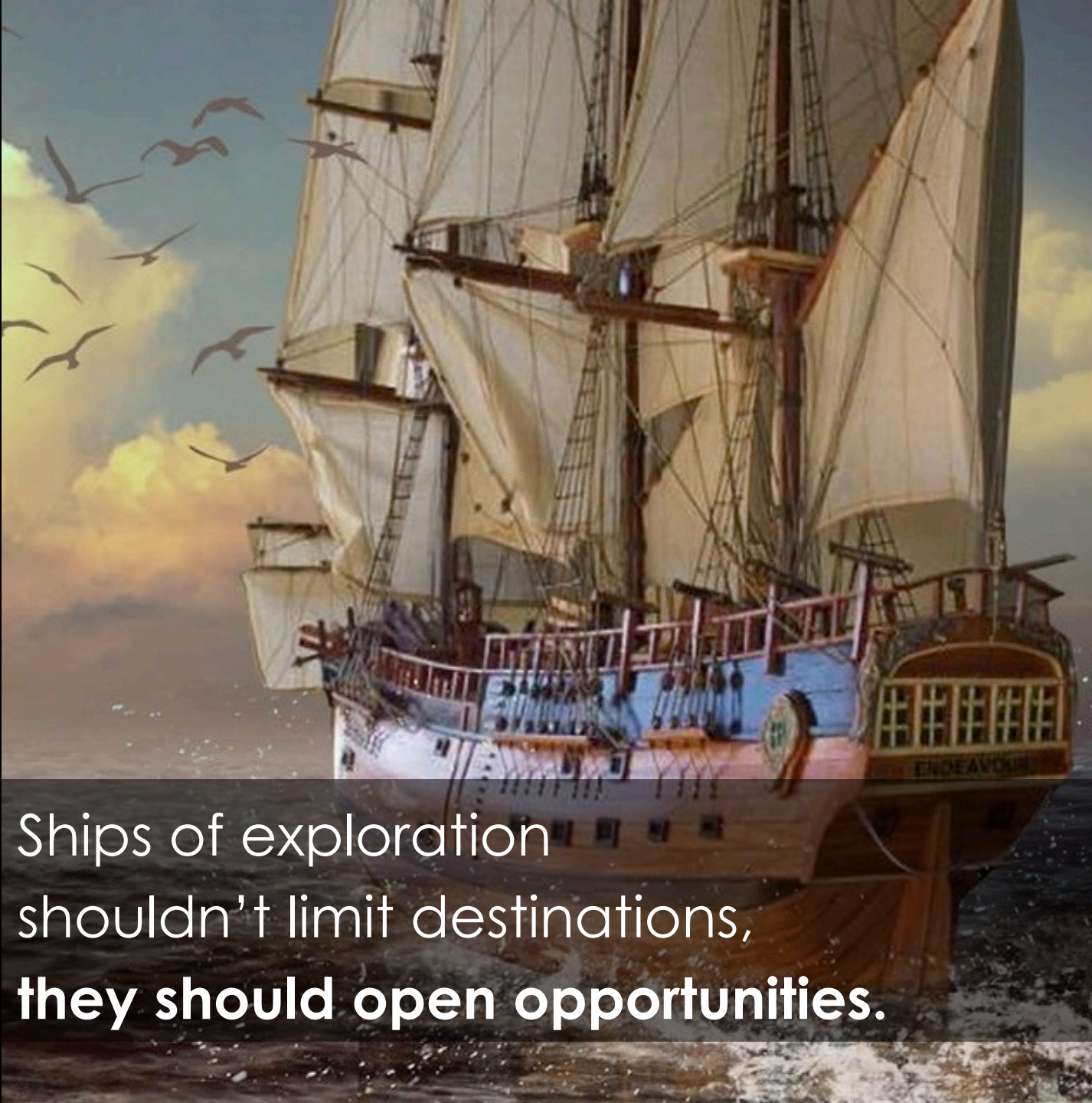


Todd May, Program Manager

April 5, 2014



The Next Great Ship

A large, multi-masted wooden sailing ship with white sails is shown on a dark sea under a sunset sky. The ship's hull is painted in shades of blue and red. The name "ENDEAVOUR" is visible on the stern. Several birds are flying in the sky above the ship.

Ships of exploration
shouldn't limit destinations,
they should open opportunities.



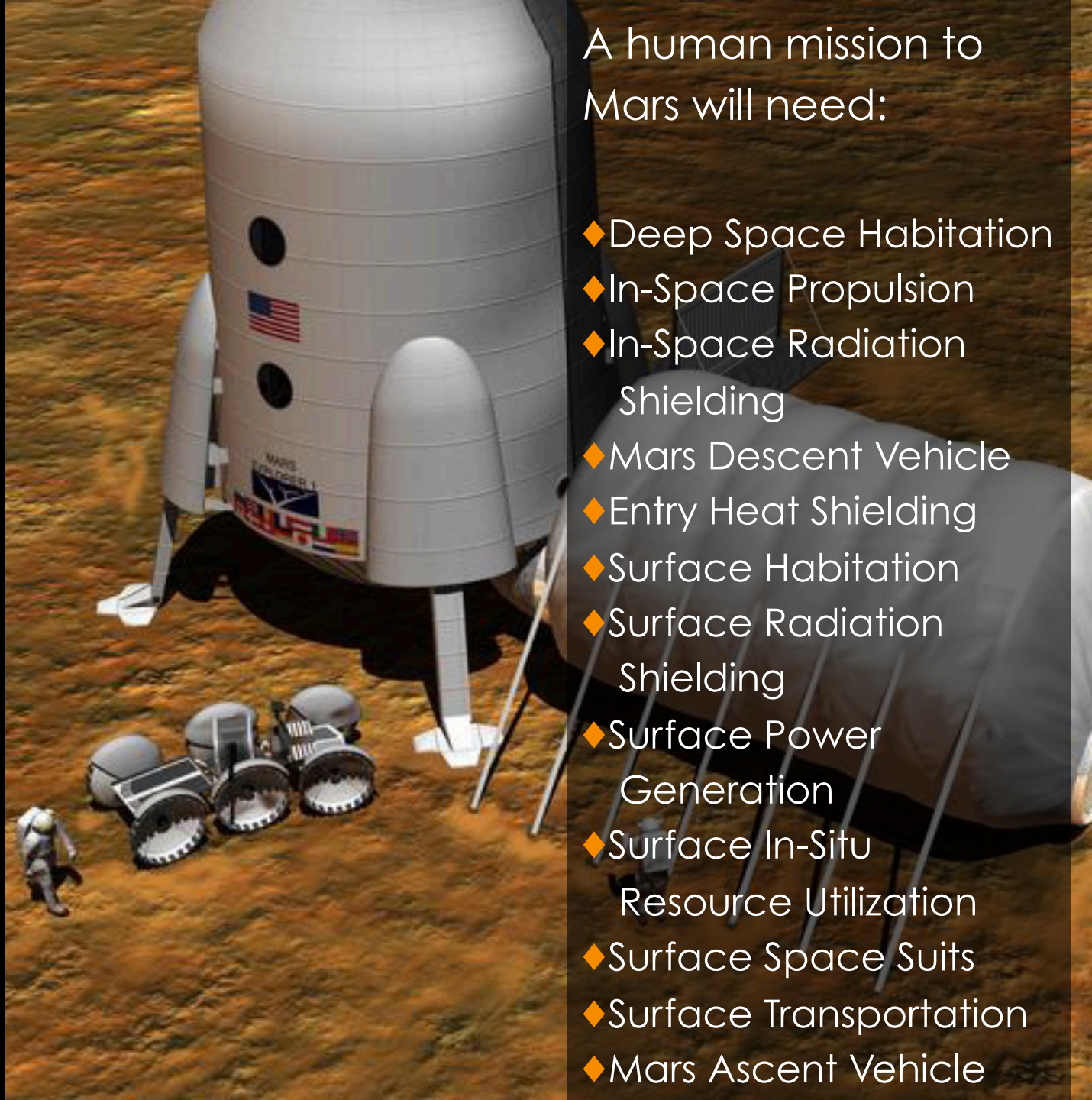
Mars missions may last for years.
Sustaining life will require innovation.

How do
humans
thrive on
a barren
world?





**Humans
are a
needy
species.**



A human mission to Mars will need:

- ◆ Deep Space Habitation
- ◆ In-Space Propulsion
- ◆ In-Space Radiation Shielding
- ◆ Mars Descent Vehicle
- ◆ Entry Heat Shielding
- ◆ Surface Habitation
- ◆ Surface Radiation Shielding
- ◆ Surface Power Generation
- ◆ Surface In-Situ Resource Utilization
- ◆ Surface Space Suits
- ◆ Surface Transportation
- ◆ Mars Ascent Vehicle



NASA's Space Launch System



Launching Soon.
Building Today.



Proven
success.
Greater
power.

Stage Adapters:

The Orion stage adapter will be the first new SLS hardware to fly.

Core Stage:

Newly developed for SLS, the Core Stage towers more than 200 feet tall

RS-25 Engines:

Space Shuttle engines for the first four flights are already in inventory



Orion:

Carries astronauts into deep space

Interim Cryogenic Propulsion Stage:

Based on the Delta IV Heavy upper stage; the power to leave Earth

Solid Rocket Boosters:

Built on Space Shuttle hardware; more powerful for a new era of exploration



Bigger
Rocket =
Unrivaled
Mass,
Unrivaled
Volume



Enables missions
no other rocket can perform.



Game-changing benefits for
robotic science missions of discovery.

Greater
power
means
**greater
versatility**



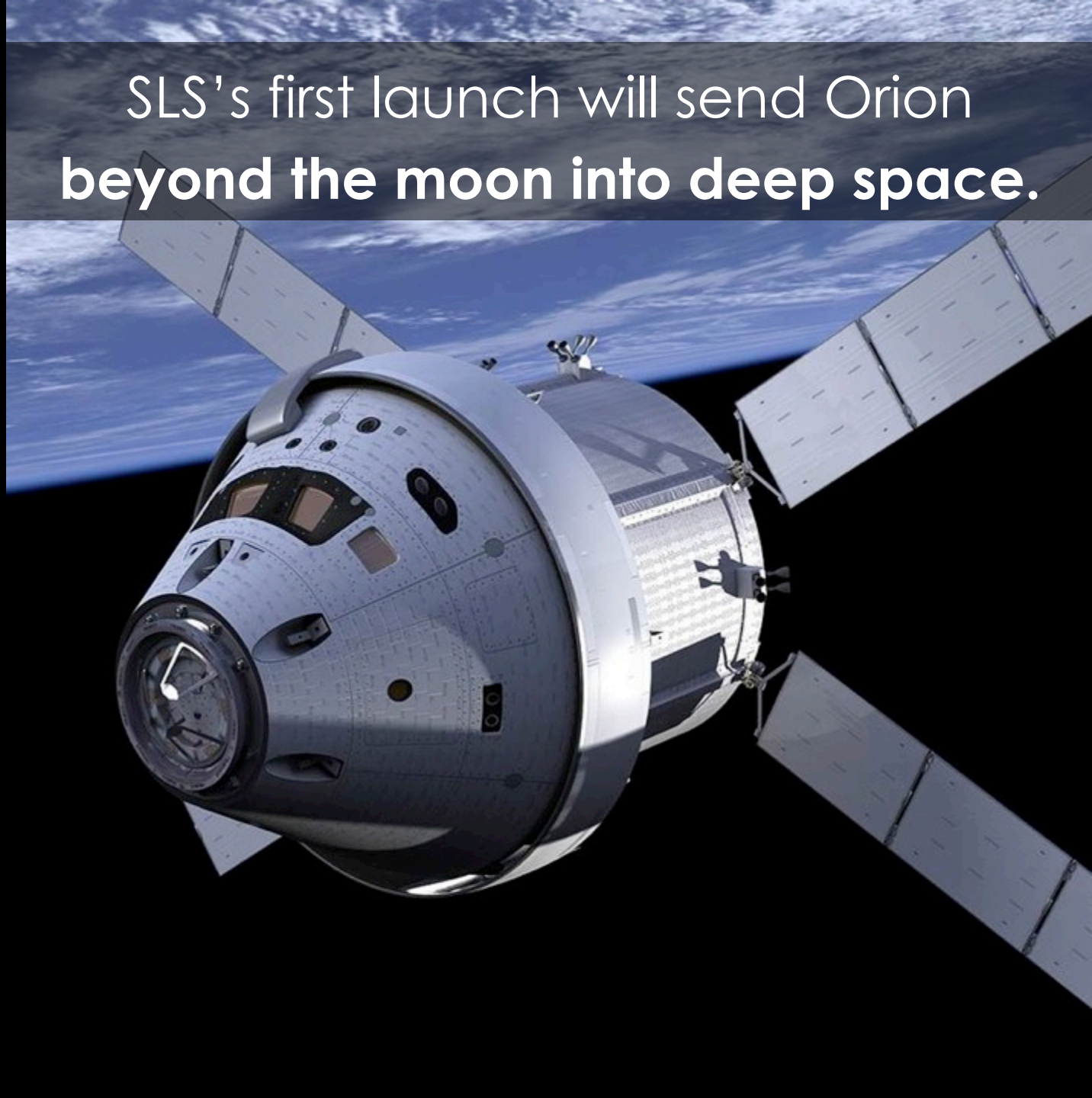
Moving
rapidly
toward
the
launch
pad

Space Launch System is currently
designing, tooling, building & testing.





SLS's first launch will send Orion
beyond the moon into deep space.



First flight
in

**December
2017**



SLS is the first step in the **journey to Mars**



Going to Mars will be difficult.
SLS provides the power that it takes.



NASA and America's future is built on
**science, technology, engineering
and mathematics.**

Today's
students
**will create
tomorrow**





Your
future
begins
now.

Get a head start on a NASA career
with our student opportunities today.



Man cannot discover
new oceans
unless he has the
courage to lose
sight of the shore.



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the journey

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