



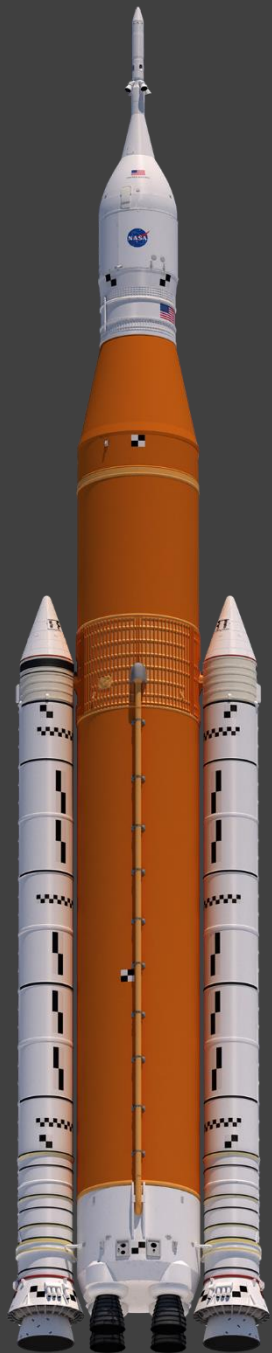
# SPACE LAUNCH SYSTEM OVERVIEW

*December 12, 2017*

**Sharon Cobb, Manager,**  
Program Operations and  
Strategic Communications Office,  
Space Launch System Program

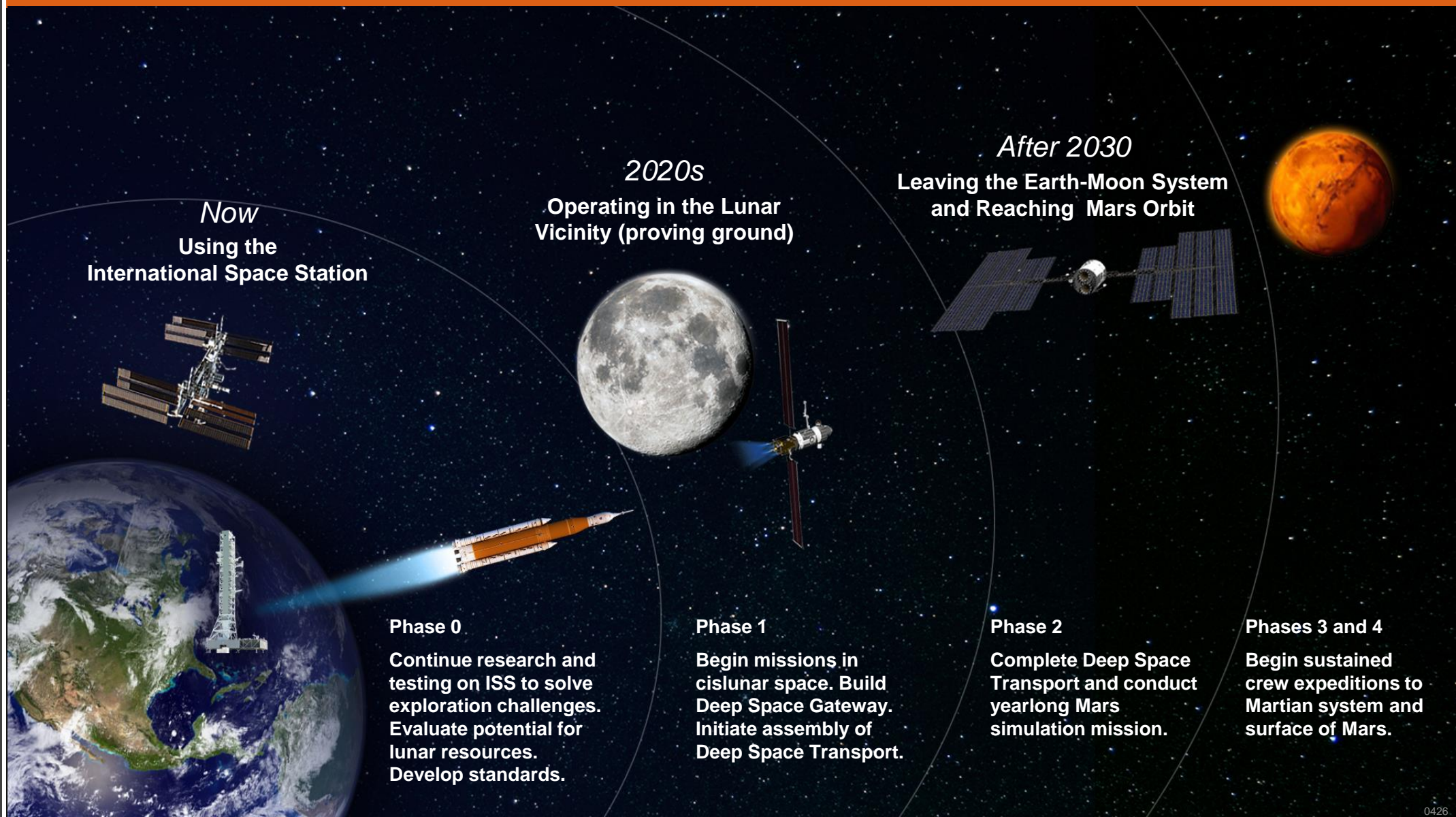


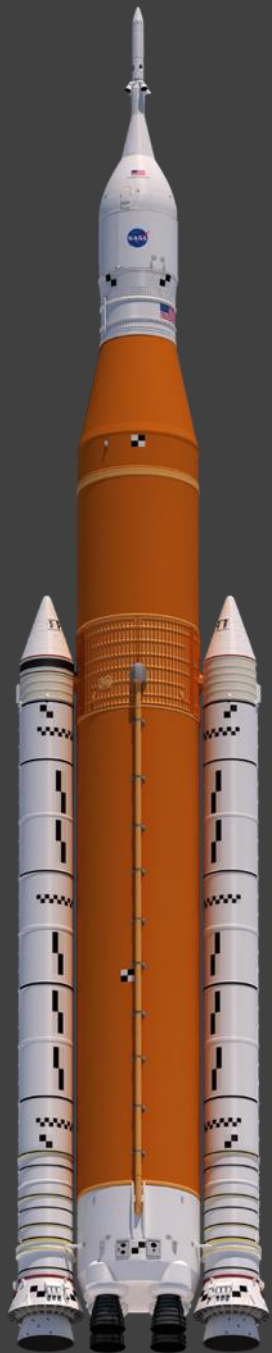




# A PHASED APPROACH

SLS: THE FOUNDATIONAL CAPABILITY FOR A GENERATION





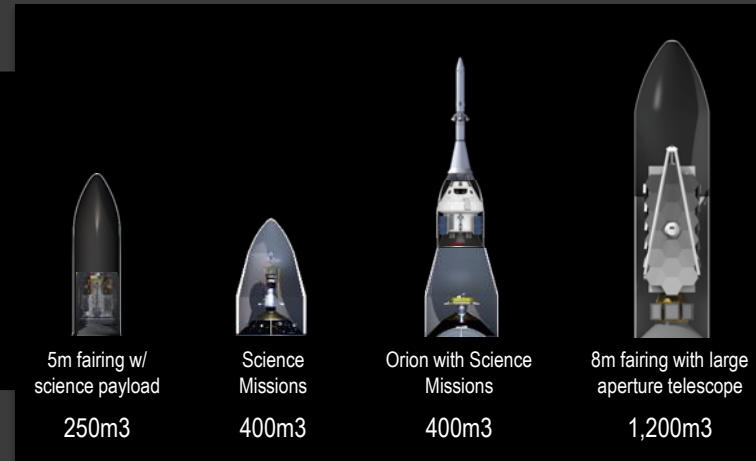
# BENEFITS OF SPACE LAUNCH SYSTEM

## GENERATIONAL CAPABILITY FOR SPACE EXPLORATION



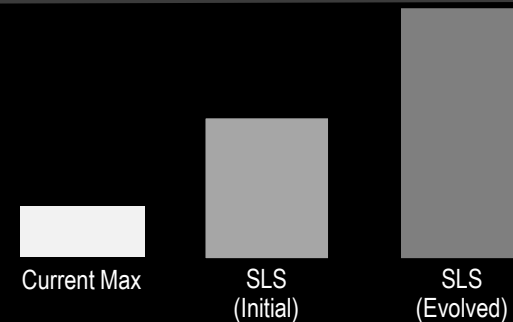
### VOLUME

- Space Launch System will be able to offer payload accommodations with five times more volume than any contemporary launch vehicle
- Payload fairings of up to 10-meter diameter are being studied



### MASS

- Space Launch System will offer an initial capability of greater than 70 metric tons to low Earth orbit; current U.S. launch vehicle maximum is 28 t
- Evolved version of SLS will offer Mars-enabling capability of greater than 130 metric tons to LEO



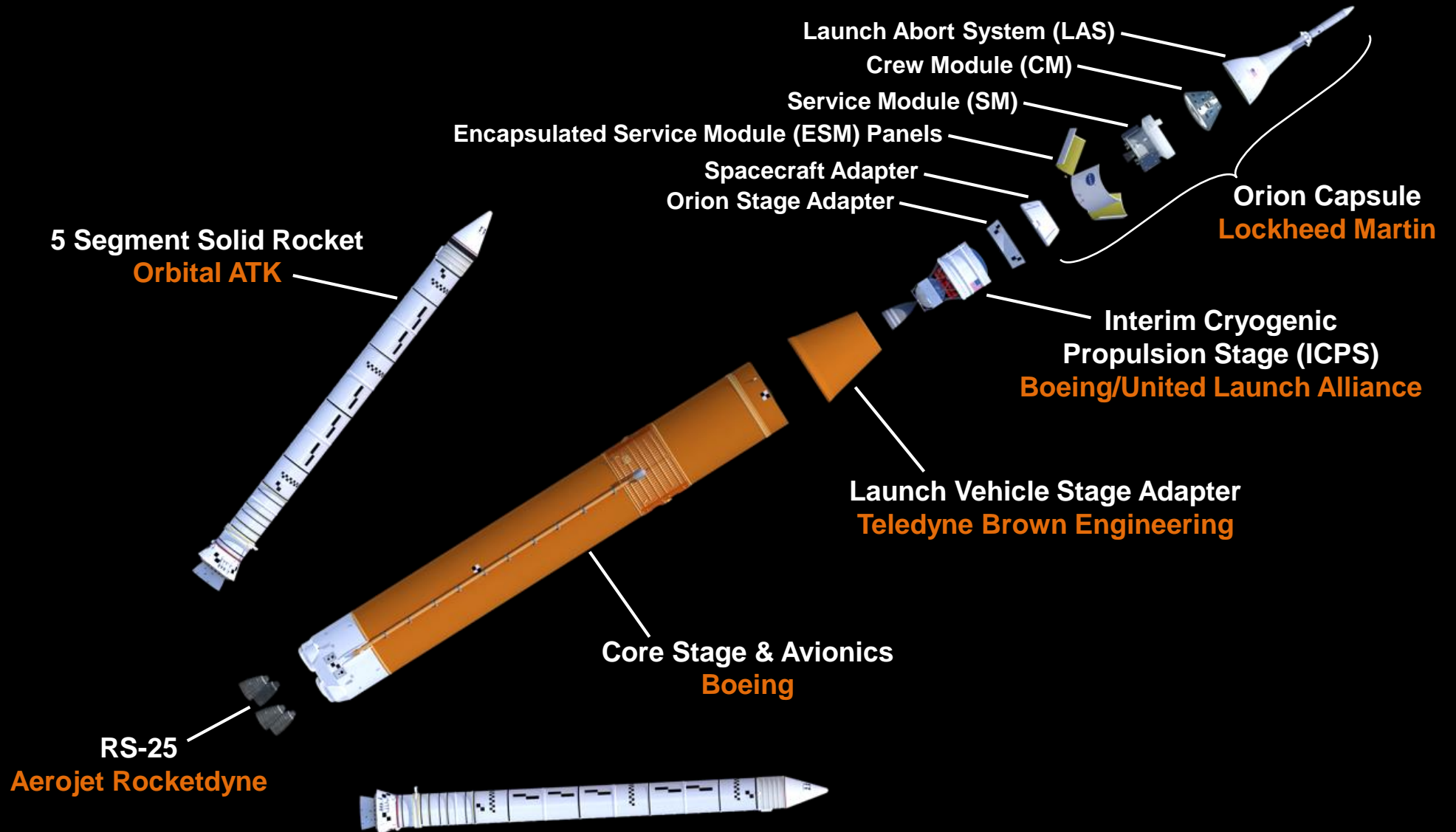
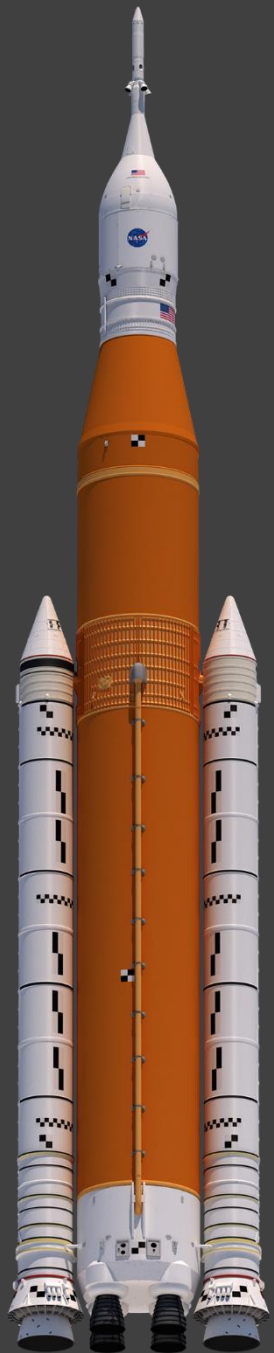
### DEPARTURE ENERGY

- SLS offers reduced transit times to the outer solar system by half or greater
- Higher characteristic energy (C3) also enables larger payloads to destination





# SLS BLOCK 1 CONFIGURATION FOR EM-1

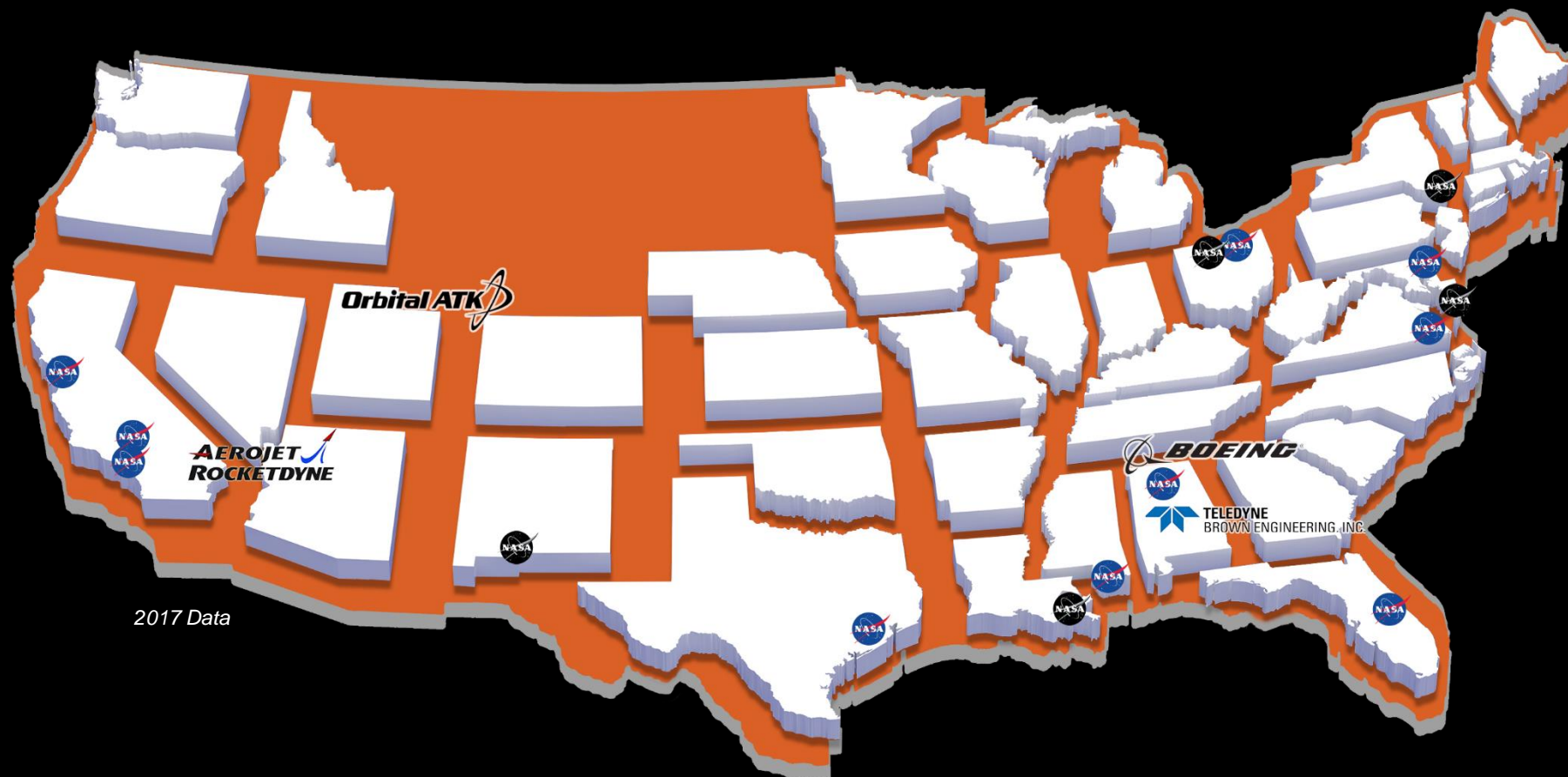


# SLS NATIONWIDE TEAM



WORKING WITH OVER 1100 CONTRACTORS IN 42 STATES



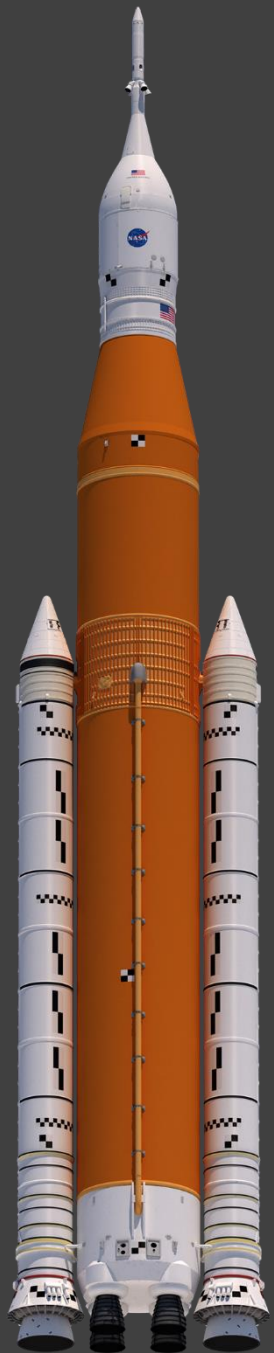
**SLS  
Program  
Economic  
Impact:**  
**\$4.29  
billion  
25,000  
jobs**



- Engaging the U.S. Aerospace Industry
- Strengthening Sectors such as Manufacturing
- Advancing Technology and Innovation for Deep-Space Exploration

 NASA Facilities  
 NASA Centers





# SLS NATIONWIDE TEAM

WORKING WITH MORE THAN 1100 CONTRACTORS IN 42 STATES



**AMRO Fabricating Corp**  
South El Monte, CA



**Manufacturing Technology, Inc.**  
South Bend, IN



# PATH TO THE PAD

PROGRESS TOWARD THE FIRST INTEGRATED FLIGHT OF SLS AND ORION

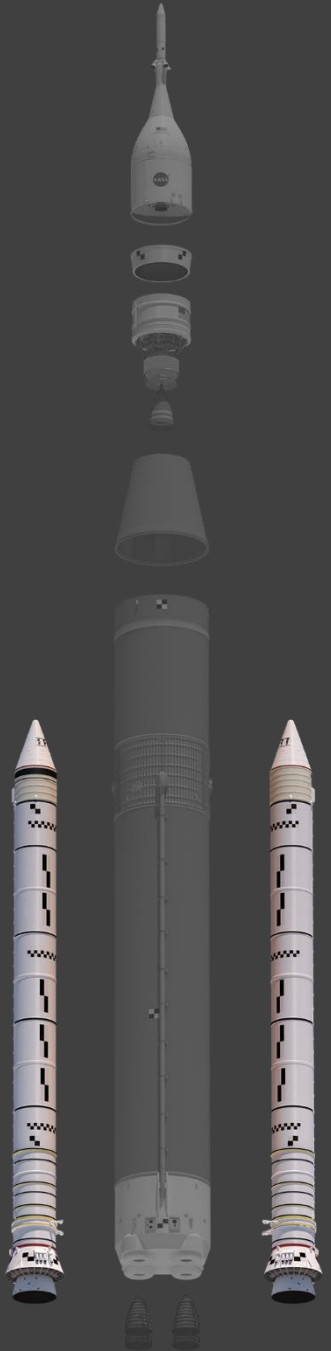
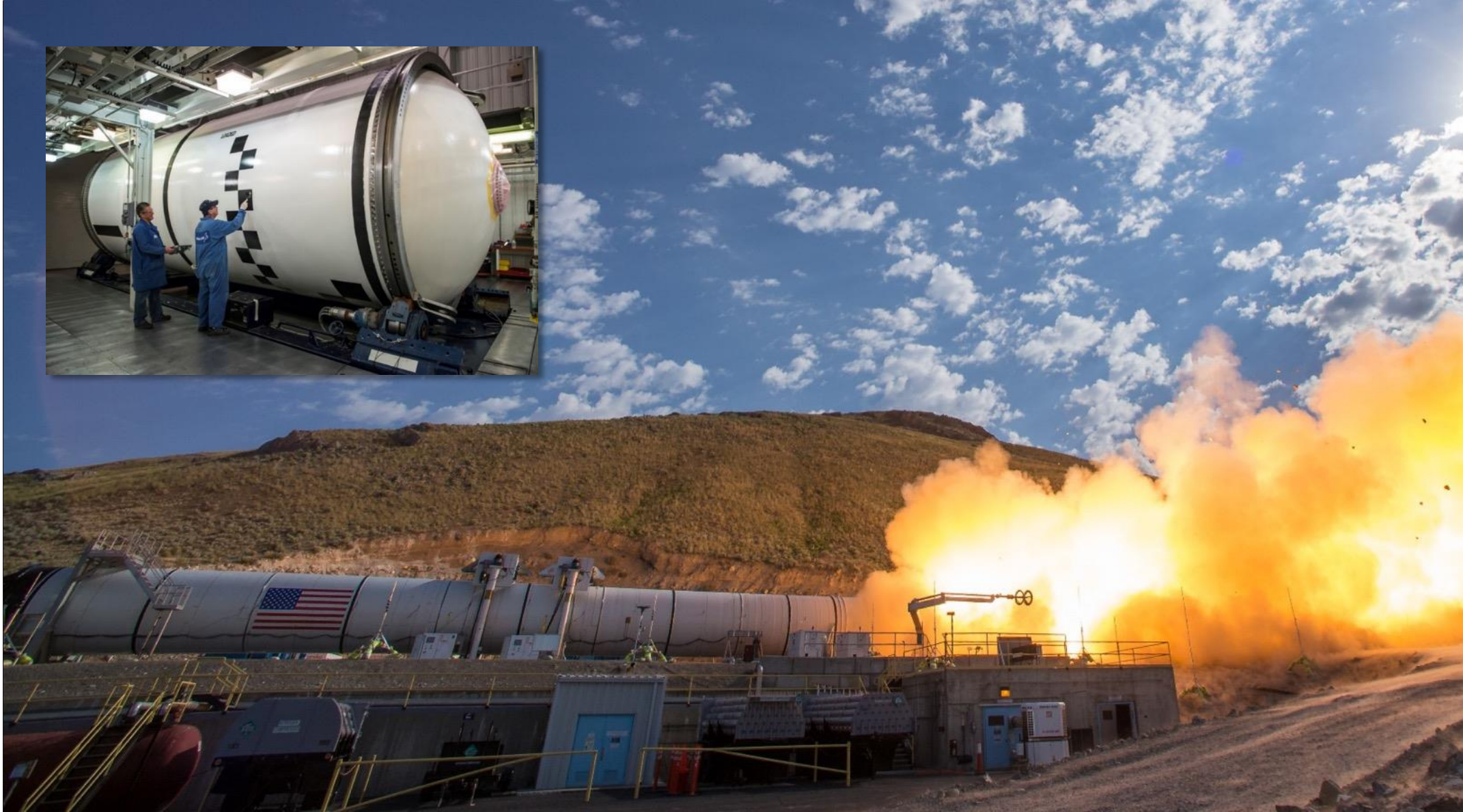


All major structural pieces of the SLS have completed welding or assembly and are being outfitted for flight.



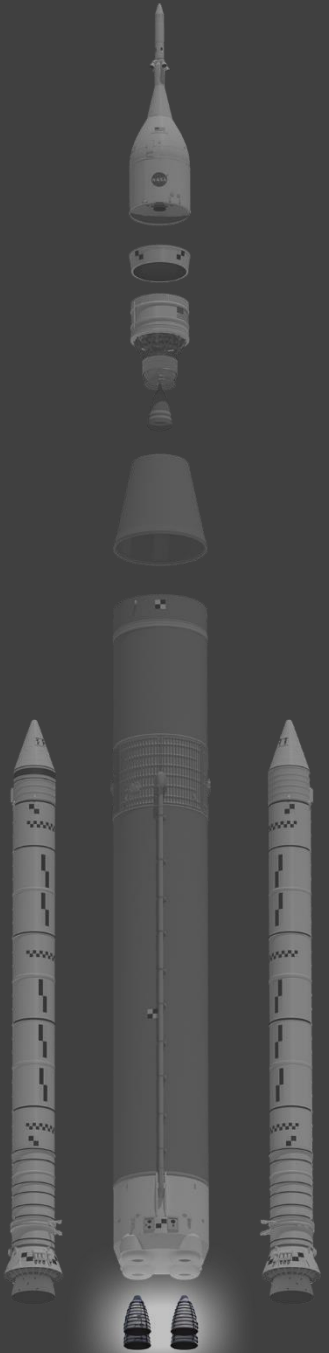


# SOLID ROCKET BOOSTERS



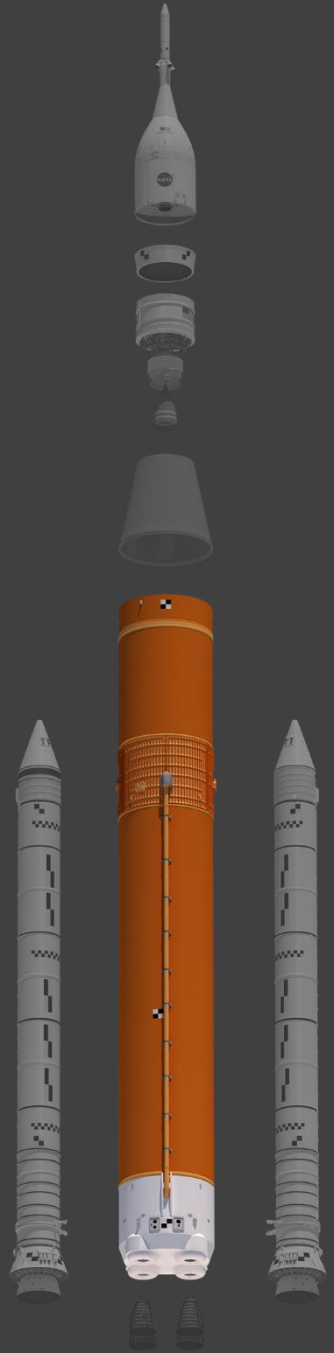
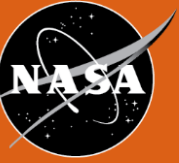


# ENGINES



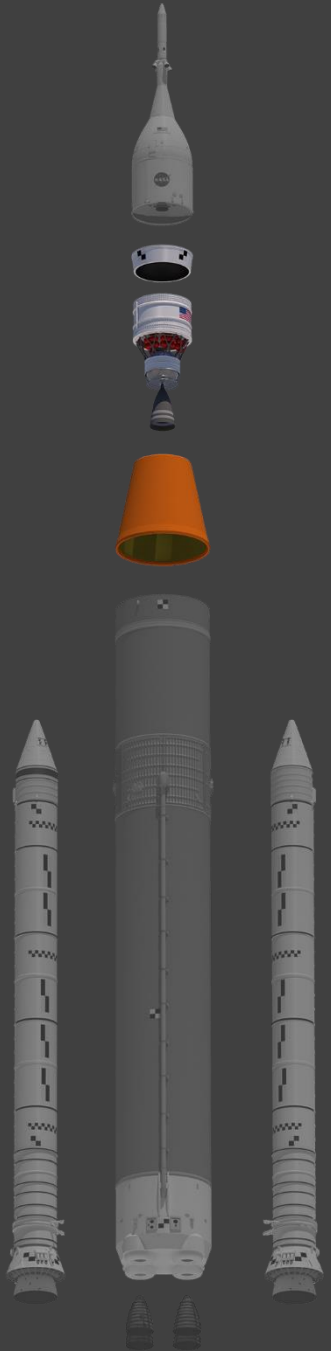
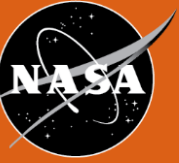


# CORE STAGE



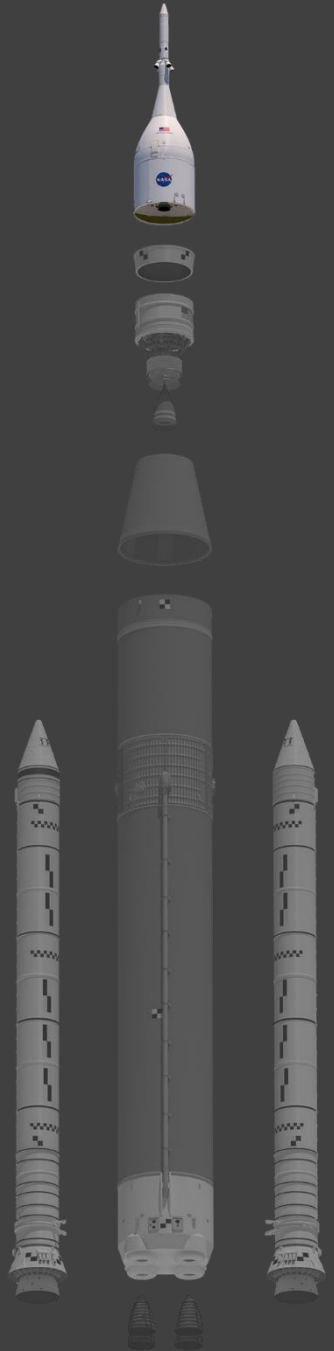


# IN-SPACE STAGE

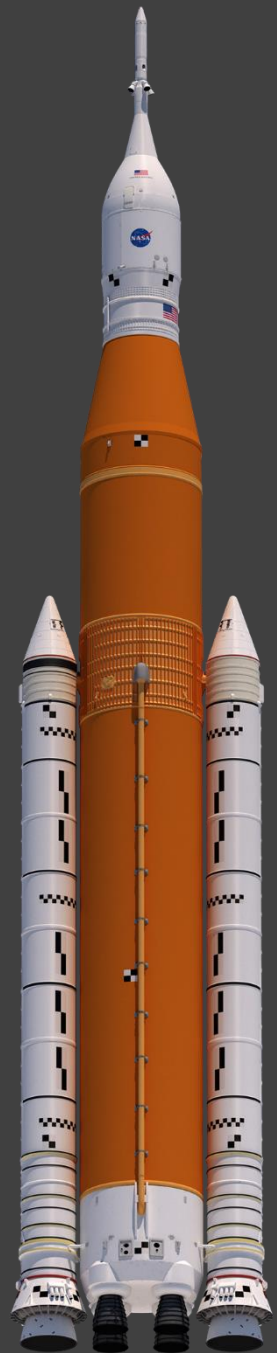




# ORION SPACECRAFT







# GROUND SYSTEMS





# INSPIRING THE NEXT GENERATION

## BUILDING THE STEM PIPELINE



Education  
and  
Outreach  
Across  
the U.S.



**Association of Science  
Technology Centers  
San Jose, CA**



**AirVenture  
Oshkosh, WI**



**Artscape: Baltimore, MD**



# IT'S HAPPENING NOW!



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# DEEP SPACE EXPLORATION SYSTEMS TEAM



**More than  
3,000  
companies  
across the  
U.S.**

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