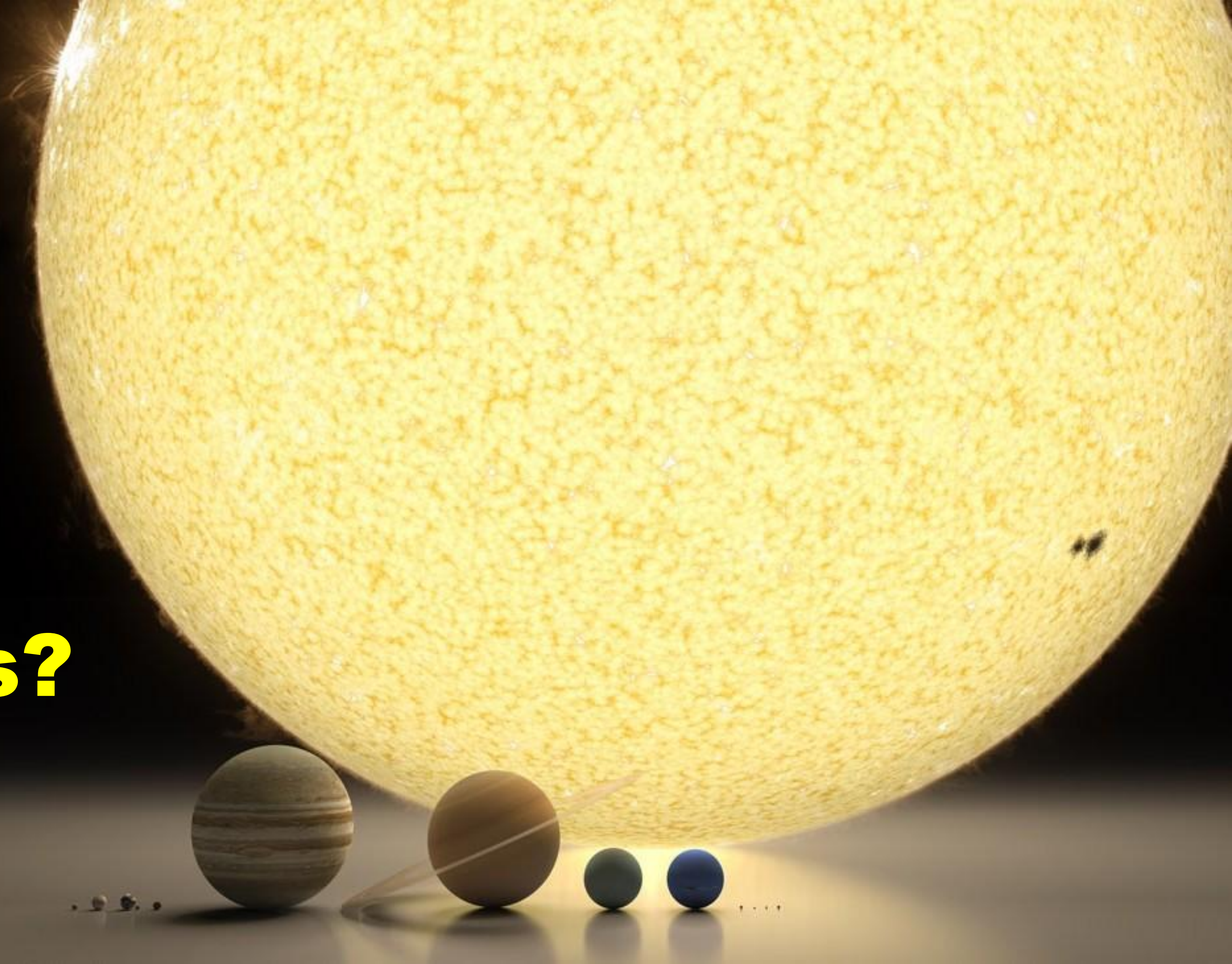


**What awaits us  
in the space industry  
in the near future?**

# Plan

1. **The insane idea of Elon Musk**
2. **Breakthrough Starshot**

**Why Mars?**





Sun



Mercury



Venus



Earth



Mars



Jupiter



Saturn



Uranus



Neptune



Pluto

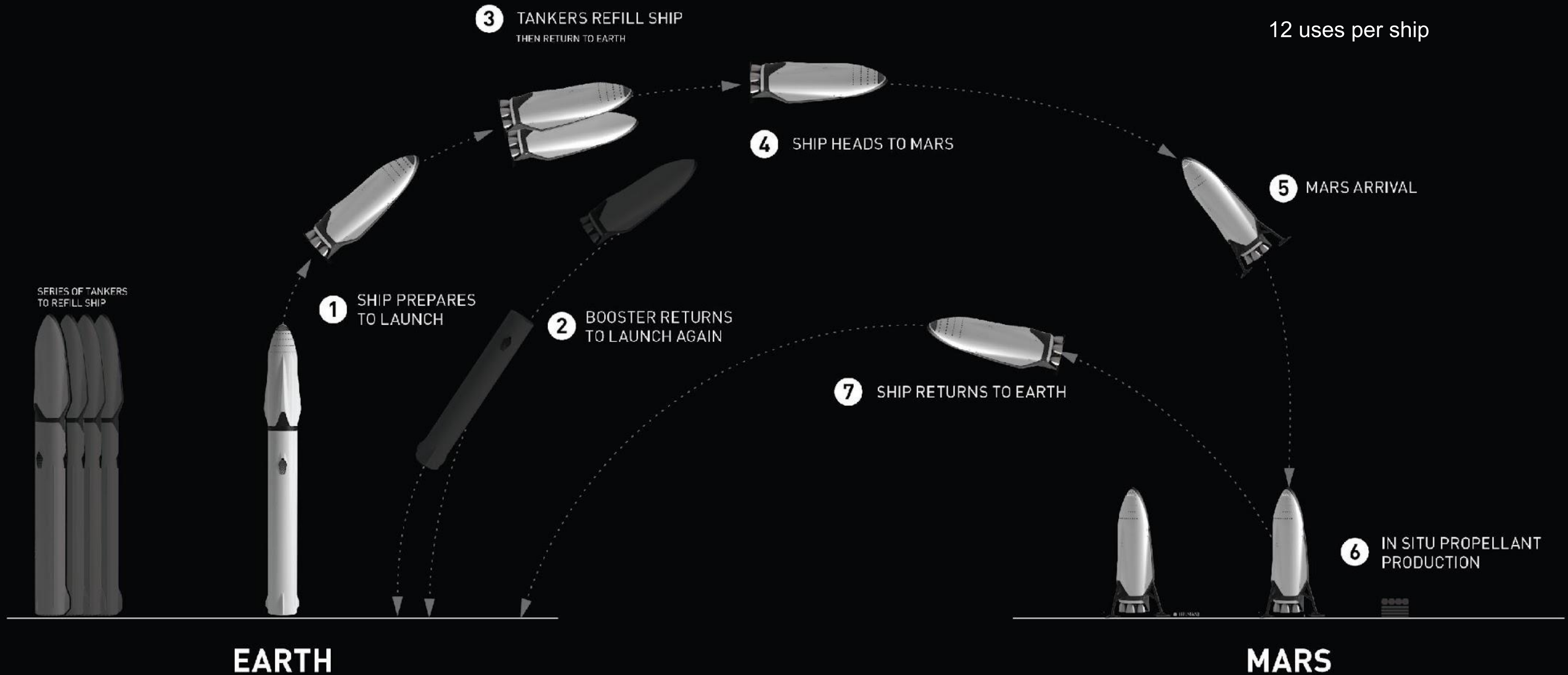


Eris

	<b>EARTH</b>	<b>MARS</b>
DIAMETER	12,756 km / 7,926 mi	6,792 km / 4,220 mi
AVERAGE DISTANCE FROM SUN	150,000,000 km / 93,000,000 mi	229,000,000 km / 142,000,000 mi
TEMPERATURE RANGE	-88C TO 58C / -126F TO 138F	-140C TO 30C / -285F TO 88F
ATMOSPHERIC COMPOSITION	78% N <sub>2</sub> , 21% O <sub>2</sub> , 1% OTHER	96% CO <sub>2</sub> , <2% Ar, <2% N <sub>2</sub> , <1% Other
FORCE OF GRAVITY (WEIGHT)	100 LBS ON EARTH	38 lbs ON MARS (62.5% LESS GRAVITY)
DAY LENGTH	24 hrs	24 hrs 40 min
LAND MASS	148.9 MILLION km <sup>2</sup>	144.8 MILLION km <sup>2</sup> (97% OF EARTH)
PEOPLE	7 BILLION	0

# SYSTEM ARCHITECTURE

TARGETED REUSE PER VEHICLE  
1,000 uses per booster  
100 per tanker  
12 uses per ship





**122 M**

	$\text{C}_{12}\text{H}_{22.4}\text{O}_2$ KEROSENE	$\text{H}_2/\text{O}_2$ HYDROGEN/OXYGEN	$\text{CH}_4/\text{O}_2$ DEEP-CRYO METHALOX
VEHICLE SIZE	●	●	●
COST OF PROP	●	●	●
REUSABILITY	●	●	●
MARS PROPELLANT PRODUCTION	×	●	●
PROPELLANT TRANSFER	●	●	●

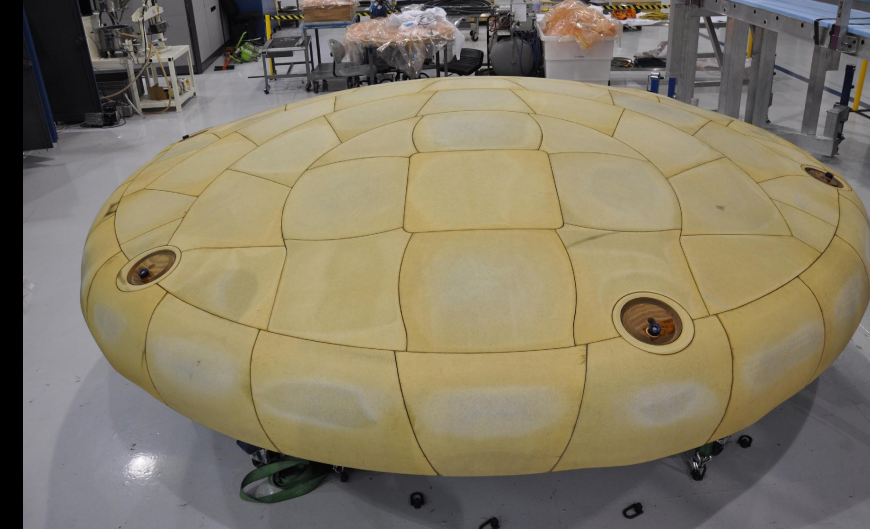
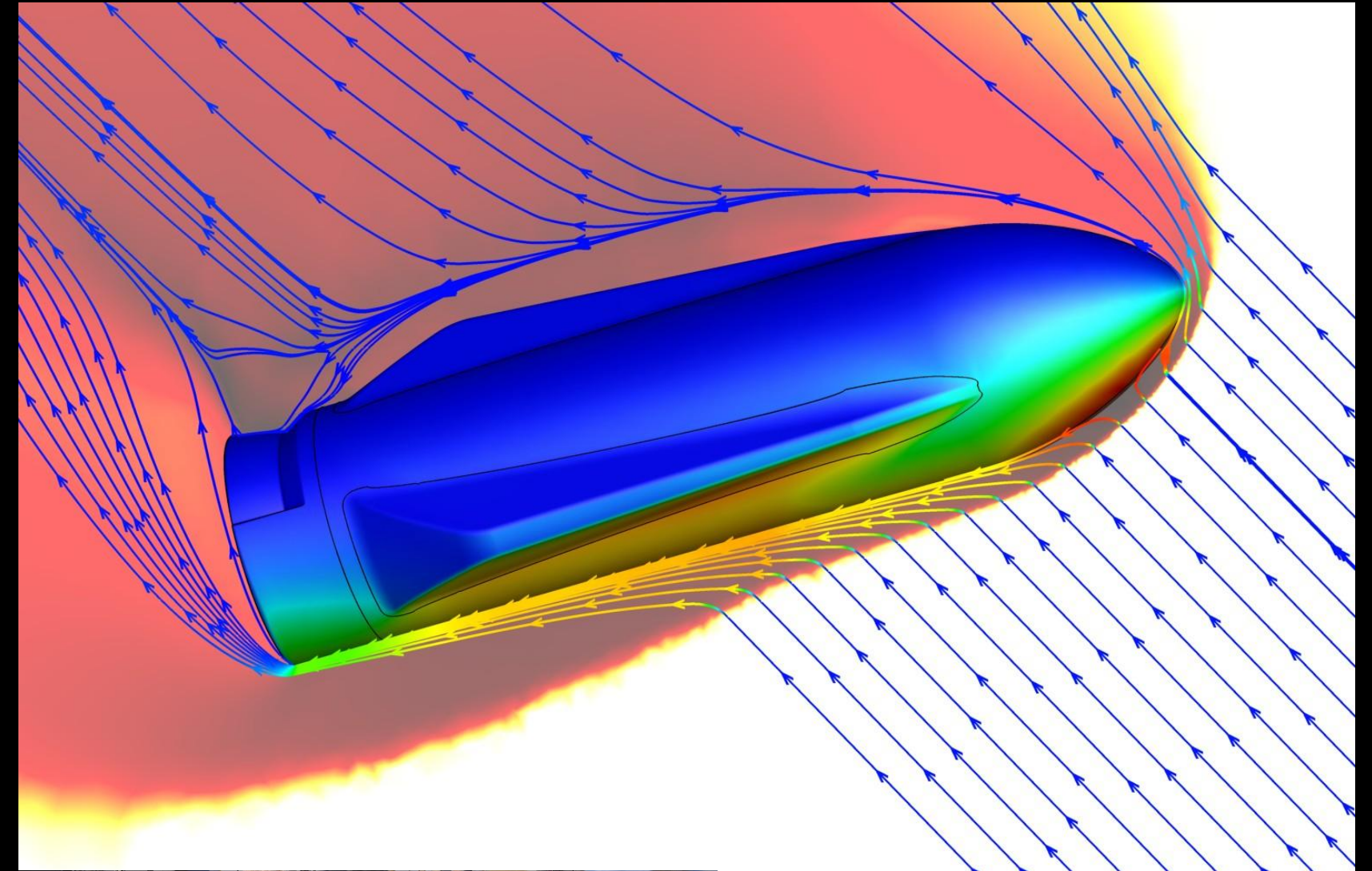
- 
- GOO
- D OK
- × BAD
- VERY BAD



# ARRIVAL

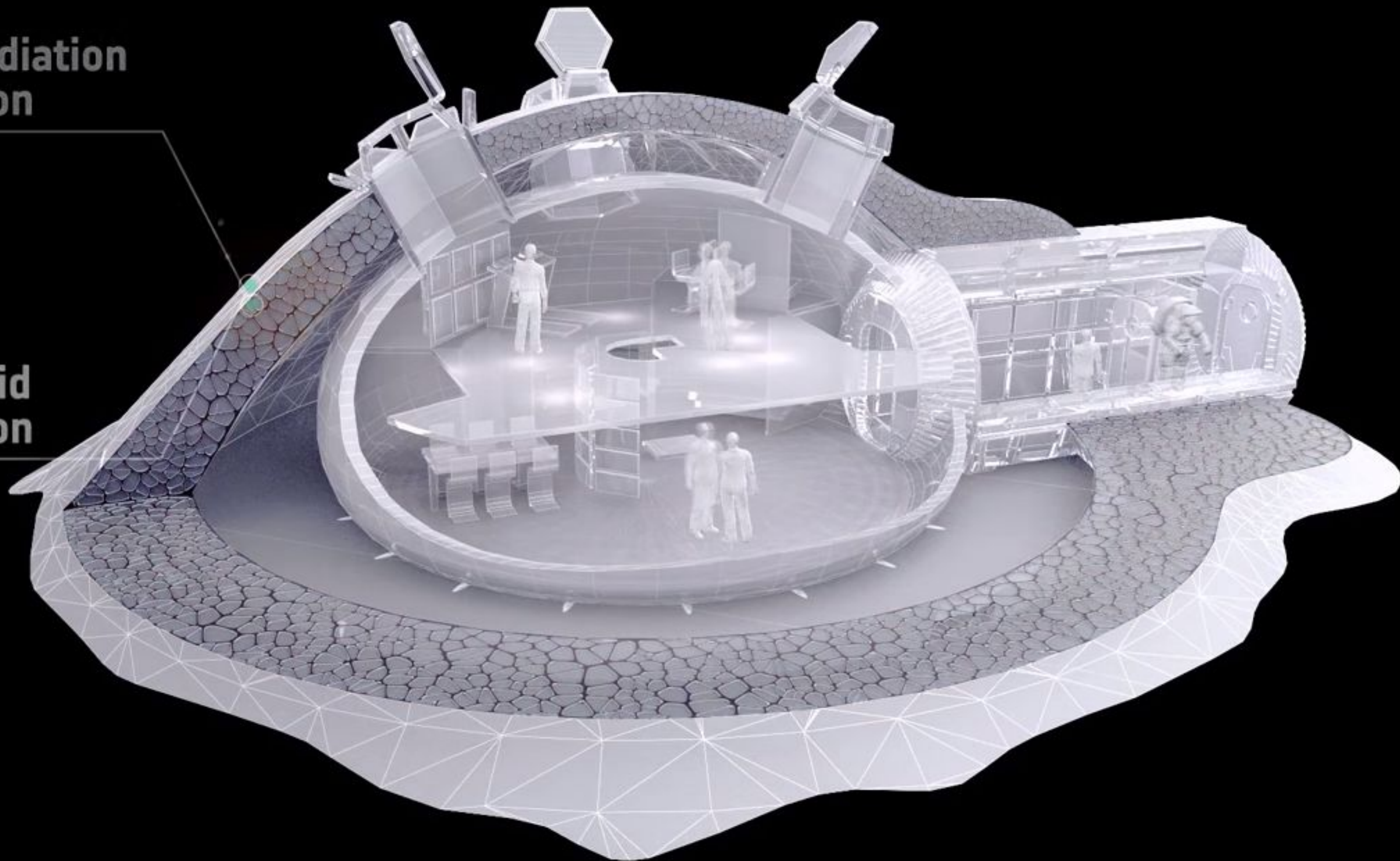
**From interplanetary space, the ship enters the atmosphere, either capturing into orbit or proceeding directly to landing**

**Aerodynamic forces provide the majority of the deceleration, then 3 center Raptor engines perform the final landing burn**



**Solar Radiation  
Protection**

**Meteoroid  
Protection**





ЗЕМЛЯ



МАРС



Твоя часть презентации

**Thank you for attention!**

