NASA Space Robotics Challenge Overview
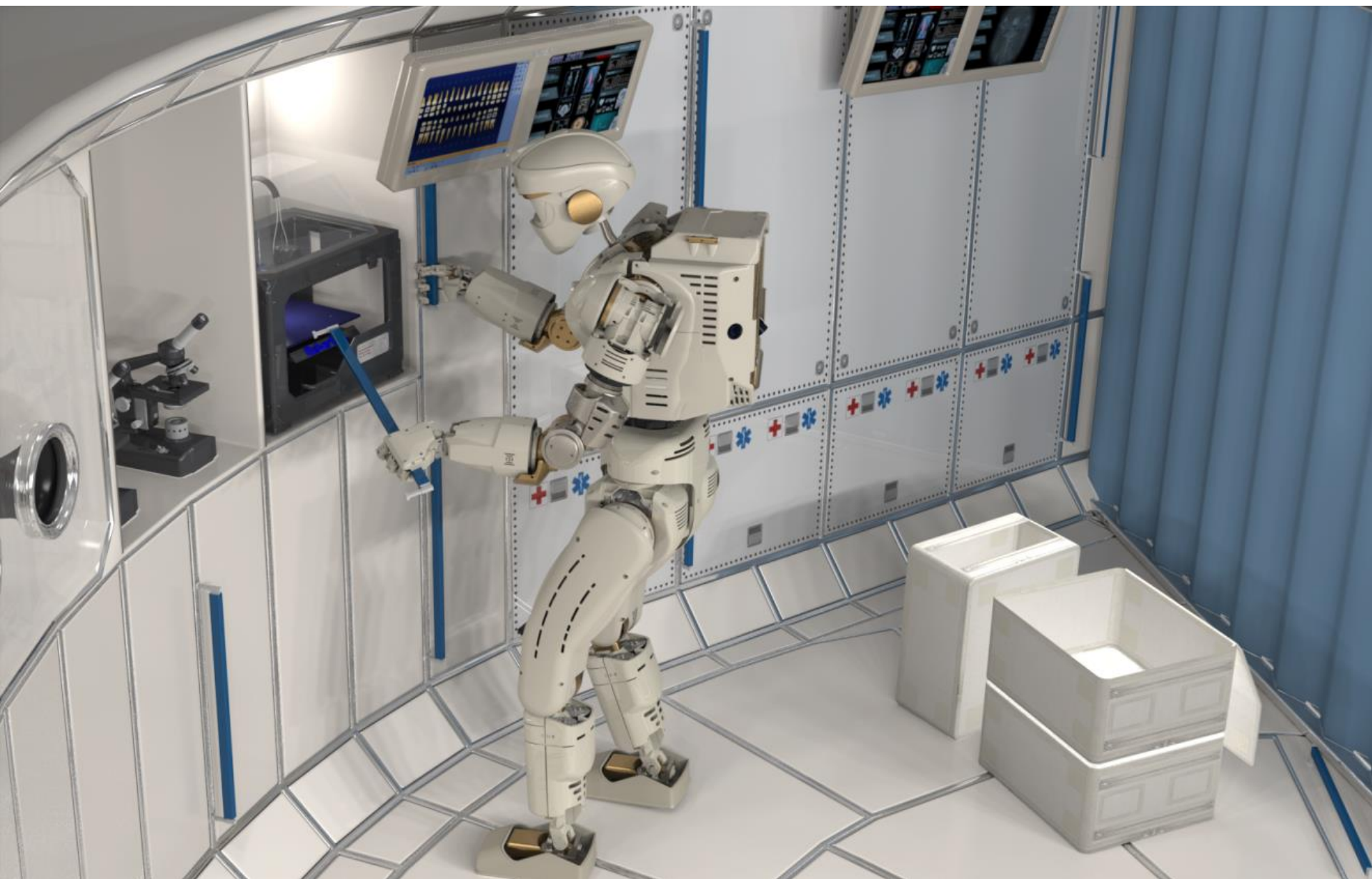
Dr. Robert (Rob) O. Ambrose

Division Chief

Software, Robotics, and Simulation Division
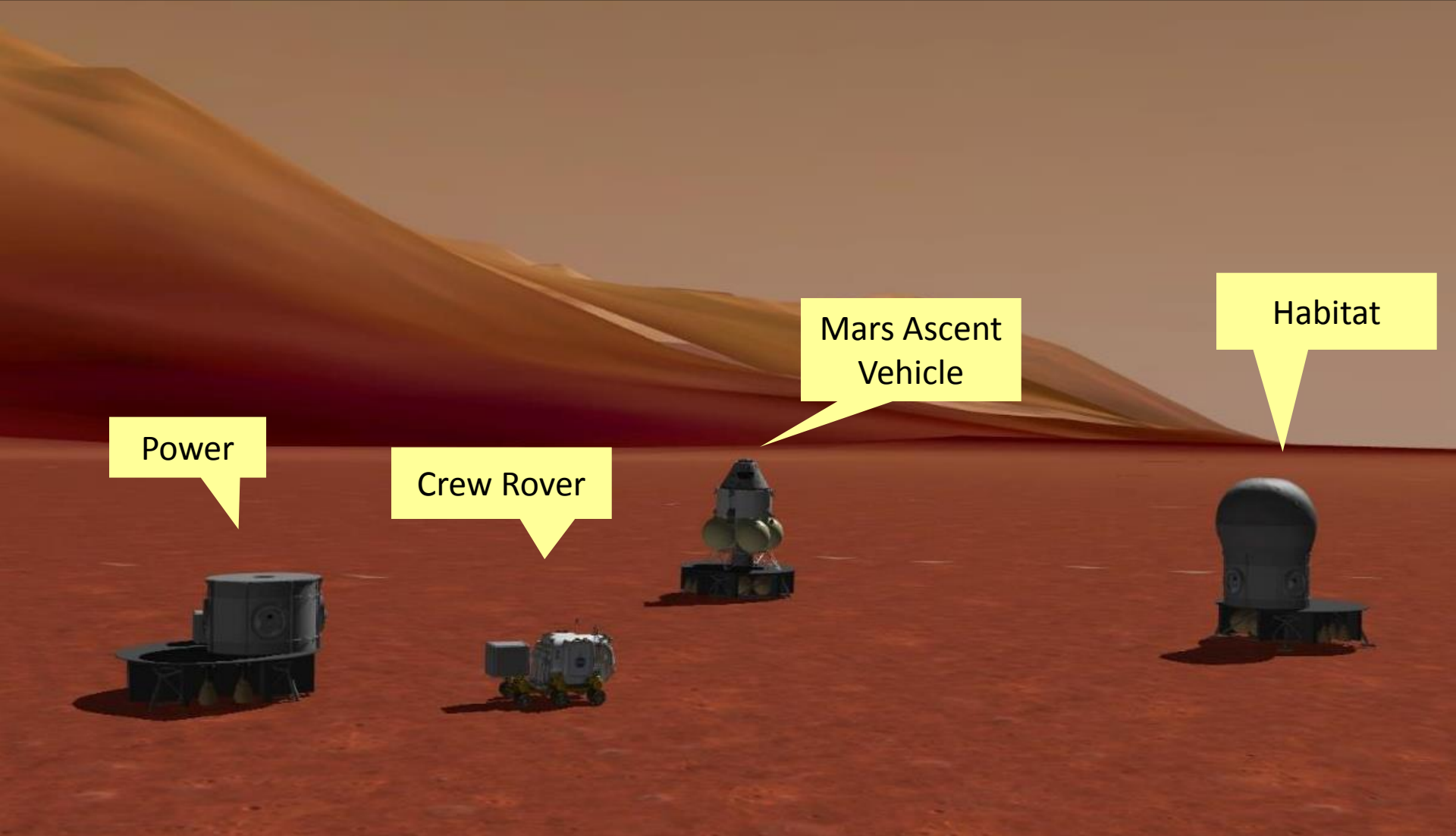
NASA JSC Engineering

Robot pre-deploying and tending equipment before crew arrival

Main Points

- A new approach to space exploration

- NASA and NSF Investment in this community.

Explorers, taking everything with them

Power

Crew Rover

Mars Ascent Vehicle

Habitat

Pre-deployed assets for human Mars exploration (tended by robots for years)
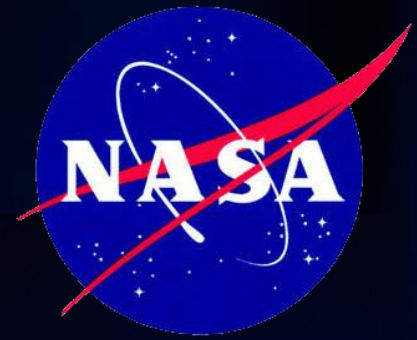
National Robotics Initiative (NRI)
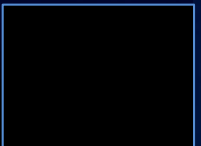## NSF, NASA, NIH, USDA, DARPA, DOE

President Obama, June 2011

NRA Requirements

- **Giving out 2 Robots**
- **Funded by NASA & NSF**

- **US Universities**
- **Participated in the DRC**
- **Written Proposal**
- **Due in August, 2015**

NRA Solicitation

- **Solicitation Number: NNH15ZOA001N-15GCD-C2**
- **Posted Date: Jun 03, 2015**
- **FedBizOpps Posted Date: Jun 03, 2015**
- **Recovery and Reinvestment Act Action: No**
- **FedGrants Posted Date: Jun 03, 2015**
- **Classification Code: A - Research and Development**
- **NAICS Code: 541712**

Follow On Funding & Challenges

Robot Host Labs will get a robot and funding

We are formulating a Space Robotics Challenge

Host Labs will help validate tasks

Main Points

- Robots will enable a new approach to human space exploration by <u>pre-deploying</u> equipment before crew arrive.

- The robot skills NASA needs are similar to the DRC, and we are going to <u>offer NRI robots with the NSF</u> to help this community.

Questions?