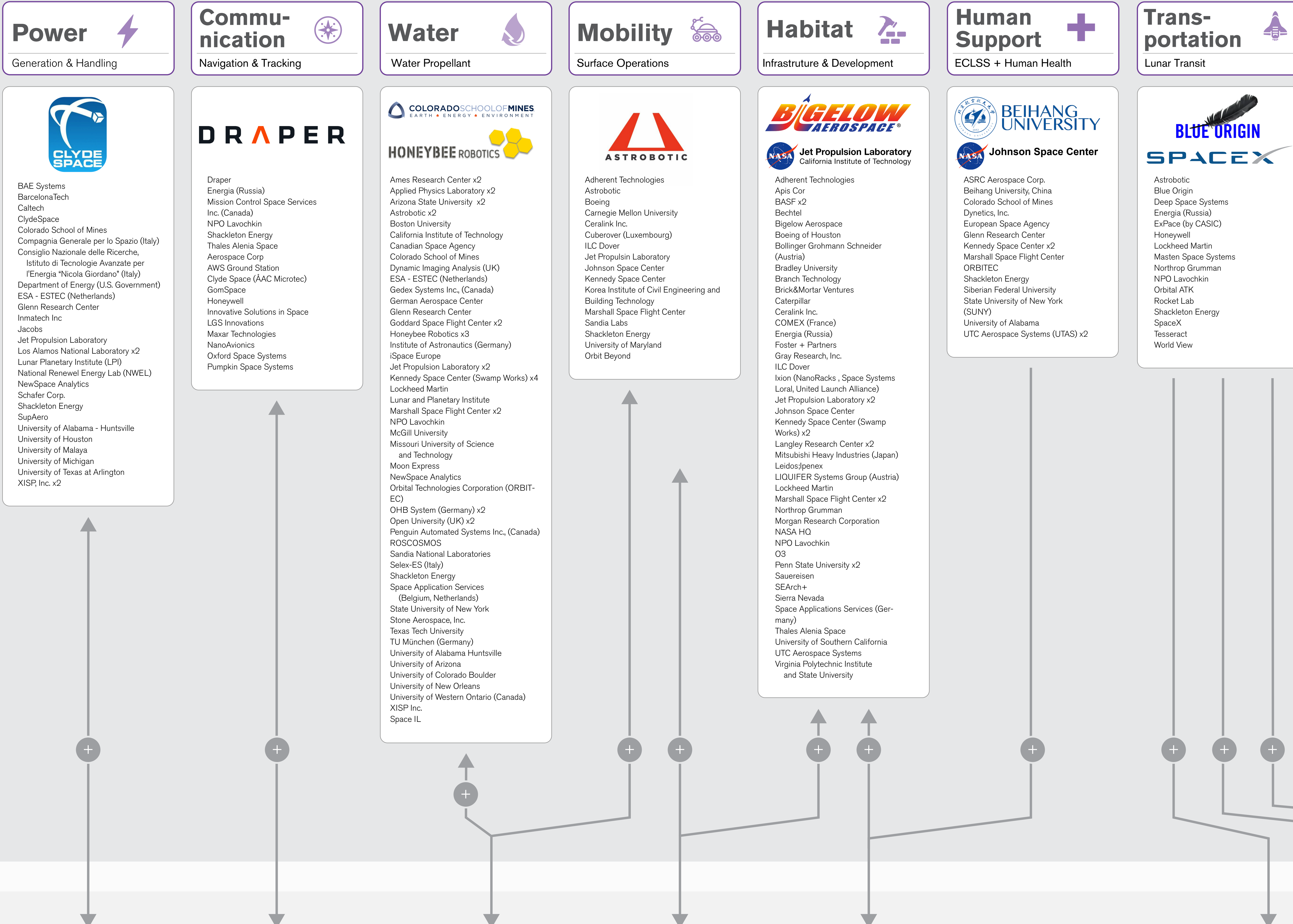


Streamlining a Critical Path to Lunar Settlement

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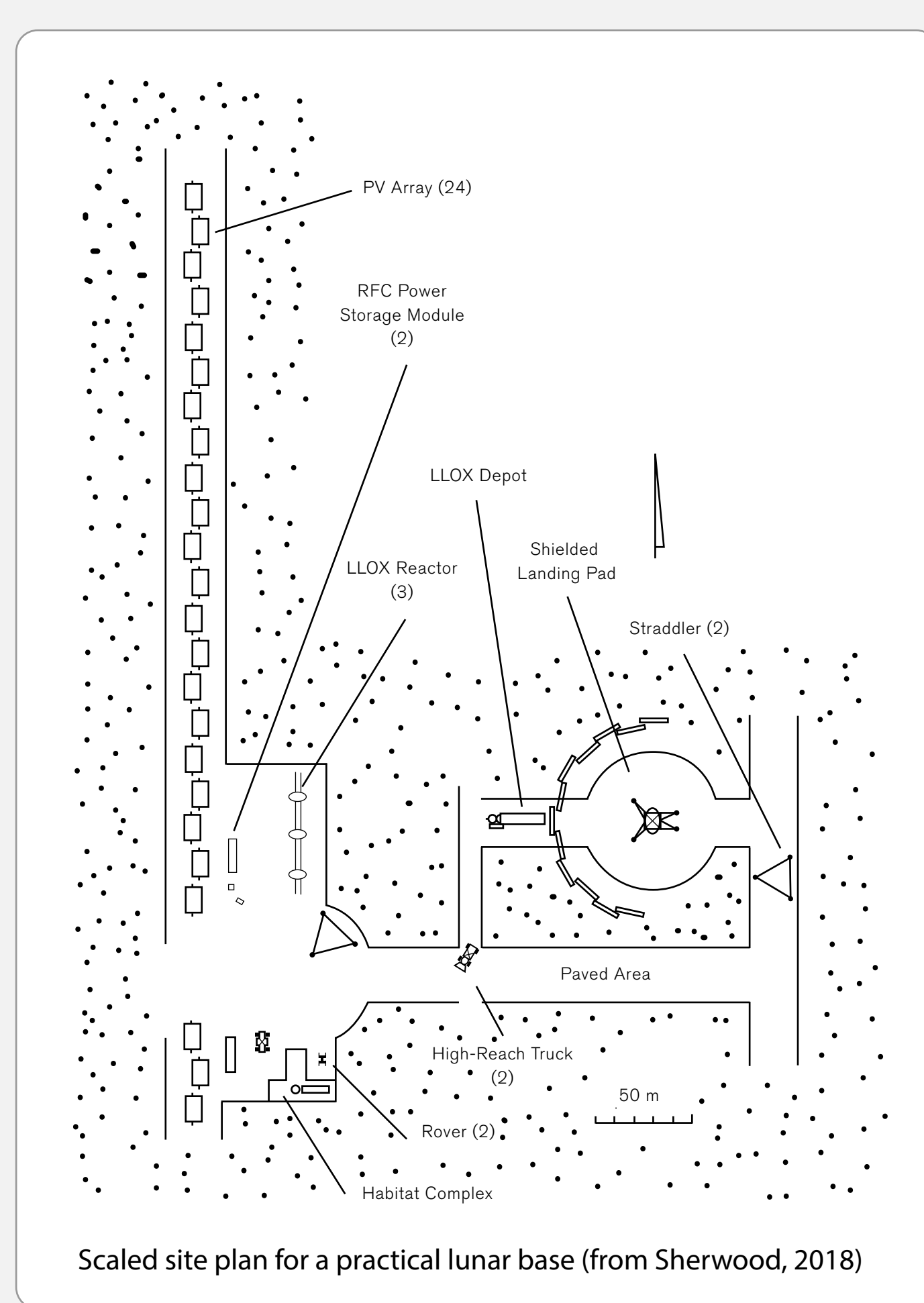
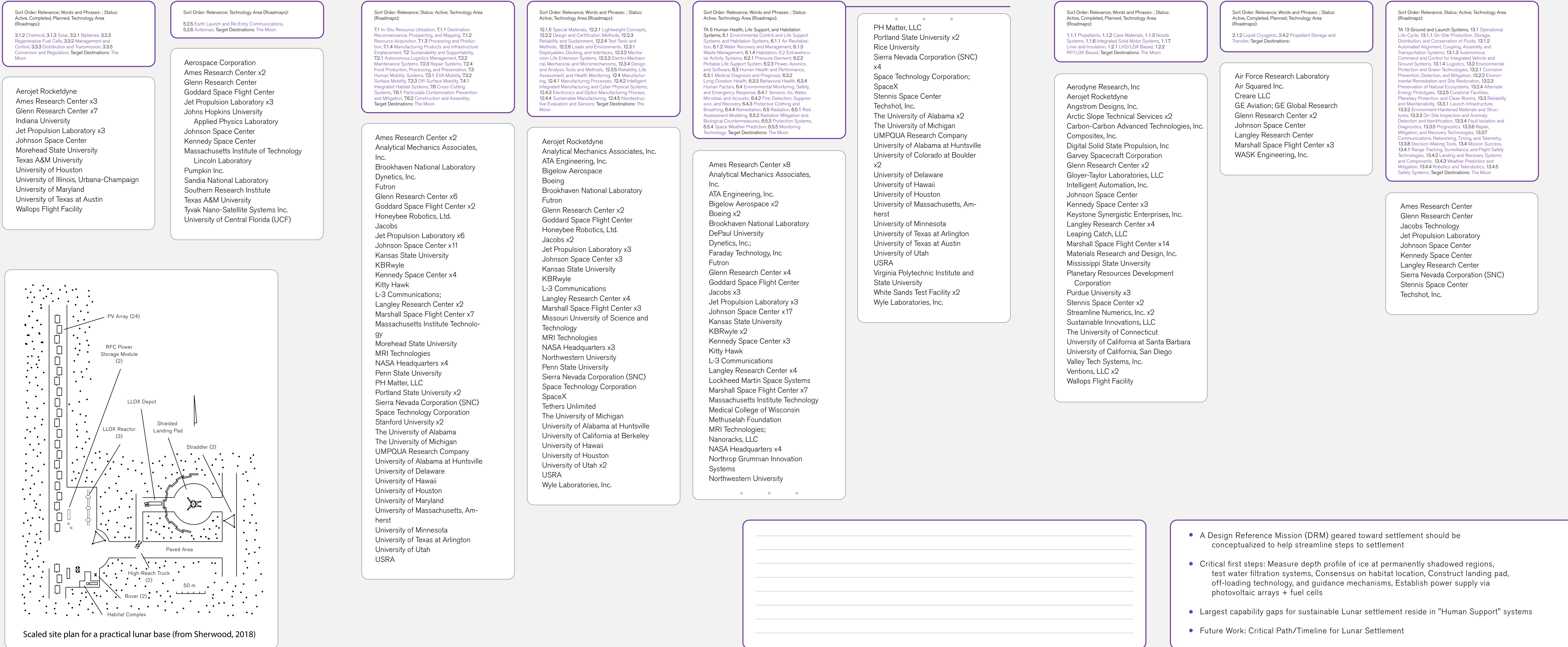
ASU Actors Portfolio



NASA Cross Cutting Actors

- Sort Order: Relevance, Words and Phrases; Status: Active, Completed, Planned, Technology Area (Roadmap); 4.21 Erosion Form; 4.24 Small Body and Meteorology; 4.25 Surface Moisture; 4.26 Moon Navigation; 4.28 Lunar Components; 4.31 Mission Management; 4.32 Surface Acquisition and Handling; 4.31 System Health Management; 4.52 Activity Planning, Scheduling, and Execution; 4.54 Multi-Agent Coordination; 4.58 Automated Data Analysis for Decision Making; 4.61 Robotic Navigation Sensors; 4.23 Robot Modeling and Simulation; Target Destinations: The Moon
- Ames Research Center x6
Army Research Laboratory
California Institute of Technology x2
Columbia University x2
Energid Technologies
Glenn Research Center x4
Goddard Space Flight Center x2
Honeybee Robotics, Ltd.
Jet Propulsion Laboratory x8
Johnson Space Center x8
Kennedy Space Center x4
Lockheed Martin Space Systems
Marshall Space Flight Center
Massachusetts Institute of Technology
Morehead State University
Ohio State University
Smart Vehicle Concepts
Stennis Space Center
Tyvak Nano-Satellite Systems Inc.
University of California, San Diego
University of Texas at Austin
William Marsh Rice University
- Sort Order: Relevance; Status: Active, Planned, Technology Area (Roadmap); 11.1.3 Flight Consulting; 11.2.4 Simulator-Based Training and Decision Support Systems; Target Destinations: The Moon
- Air Force Research Laboratory
Ames Research Center
Glenn Research Center
Goddard Space Flight Center x5
Jet Propulsion Laboratory
Johnson Space Center
Wallops Flight Facility
- Status: Active Technology Area (Roadmap); 14.1.1 Passive Thermal Control; 14.1.2 Active Thermal Control; 14.2.3 Heat Rejection and Energy Storage; 14.3.1 Accretion; 14.3.2 Thermal Protection System Modeling and Simulation
- Ames Research Center
Arizona State University
Brigham Young University
Converter Source, LLC
Glenn Research Center
Goddard Space Flight Center
Iris Technology Corporation
Jet Propulsion Laboratory
Johnson Space Center
Nanosonic, Inc.

NASA Tech Portfolio



- A Design Reference Mission (DRM) geared toward settlement should be conceptualized to help streamline steps to settlement
- Critical first steps: Measure depth profile of ice at permanently shadowed regions, test water filtration systems, consensus on habitat location, construct landing pad, off-loading technology, and guidance mechanisms, Establish power supply via photovoltaic arrays + fuel cells
- Largest capability gaps for sustainable Lunar settlement reside in "Human Support" systems
- Future Work: Critical Path/Timeline for Lunar Settlement