

## Appendix C: NASA SBIR-STTR Technology Taxonomy

### Avionics and Astrionics

Airport Infrastructure and Safety  
 Attitude Determination and Control  
 Guidance, Navigation, and Control  
 On-Board Computing and Data Management  
 Pilot Support Systems  
 Spaceport Infrastructure and Safety  
 Telemetry, Tracking and Control

### Bio-Technology

Air Revitalization and Conditioning  
 Biomass Production and Storage  
 Biomedical and Life Support  
 Biomolecular Sensors  
 Sterilization/Pathogen and Microbial Control  
 Waste Processing and Reclamation

### Communications

Architectures and Networks  
 Autonomous Control and Monitoring  
 Laser  
 RF

### Cryogenics

Fluid Storage and Handling  
 Instrumentation  
 Production

### Education

General Public Outreach  
 K-12 Outreach  
 Mission Training

### Electronics

Highly-Reconfigurable  
 Photonics  
 Radiation-Hard/Resistant Electronics  
 Ultra-High Density/Low Power

### Extravehicular Activity

Manned-Maneuvering Units  
 Portable Life Support  
 Suits  
 Tools

### Information

Autonomous Reasoning/Artificial Intelligence  
 Computer System Architectures  
 Data Acquisition and End-to-End-Management  
 Data Input/Output Devices  
 Database Development and Interfacing  
 Expert Systems  
 Human-Computer Interfaces  
 Portable Data Acquisition or Analysis Tools  
 Software Development Environments  
 Software Tools for Distributed Analysis and Simulation

### Manufacturing

Earth-Supplied Resource Utilization  
 In-situ Resource Utilization  
 Microgravity

### Materials

Ceramics  
 Composites  
 Computational Materials  
 Metallics  
 Multifunctional/Smart Materials  
 Optical & Photonic Materials  
 Organics/Bio-Materials  
 Radiation Shielding Materials  
 Semi-Conductors/Solid State Device Materials  
 Superconductors and Magnetic  
 Tribology

### Microgravity

Biophysical Utilization  
 Combustion  
 Liquid-Liquid Interfaces

### Power and Energy

Biochemical Conversion  
 Energy Storage  
 MHD and Related Conversion  
 Nuclear Conversion  
 Photovoltaic Conversion  
 Power Management and Distribution  
 Renewable Energy  
 Thermodynamic Conversion  
 Thermoelectric Conversion  
 Wireless Distribution

### Propulsion

Aerobrake  
 Aircraft Engines  
 Beamed Energy  
 Chemical  
 Electromagnetic Thrusters  
 Electrostatic Thrusters  
 Feed System Components  
 Fundamental Propulsion Physics  
 High Energy Propellents (Recombinant Energy & Metallic Hydrogen)  
 Launch Assist (Electromagnetic, Hot Gas and Pneumatic)  
 MHD  
 Micro Thrusters  
 Monopropellants  
 Nuclear (Adv Fission, Fusion, Anti-Matter, Exotic Nuclear)  
 Propellant Storage  
 Solar  
 Tethers

### Robotics

Human-Robotic Interfaces  
 Integrated Robotic Concepts and Systems  
 Intelligence  
 Manipulation  
 Mobility  
 Perception/Sensing  
 Teleoperation

### Sensors and Sources

Biochemical  
 Gravitational  
 High-Energy  
 Large Antennas and Telescopes  
 Microwave/Submillimeter  
 Optical  
 Particle and Fields  
 Sensor Webs/Distributed Sensors  
 Substrate Transfer Technology

### Structures

Airframe  
 Airlocks/Environmental Interfaces  
 Controls-Structures Interaction (CSI)  
 Erectable  
 Inflatable  
 Kinematic-Deployable  
 Launch and Flight Vehicle  
 Modular Interconnects  
 Structural Modeling and Tools  
 Tankage

### Thermal

Ablatives  
 Control Instrumentation  
 Cooling  
 Reuseable  
 Thermal Insulating Materials

### Verification and Validation

Operations Concepts and Requirements  
 Simulation Modeling Environment  
 Testing Facilities  
 Testing Requirements and Architectures  
 Training Concepts and Architectures