National Aeronautics and Space Administration
Exploration Systems Overview
Von Braun Symposium
Dan Dumbacher
Assistant Associate Administrator
Human Exploration Capabilities
21st CGSP Product Lines

PL#1: Florida Launch Modernization Infrastructure
- Power, Utility & Facility Systems
- IT Systems
- Propellants, Gases, & Life Support Systems
- Safety & Security Systems

PL#2: Environmental Remediation & Technologies
- Energy Conservation/Reduction
- Enhanced Remediation
- Natural Resource Mitigation
- Environmental Replacement
- Technology Development

PL#3: Offline Manufacturing, Processing & Recovery Systems
- Payload Processing
- Manufacturing
- Laboratory/Testing
- Servicing/Hazardous Operations
- Recovery

PL#4: Range Interface & Control Services (RICS)
- Command & Control
- Weather
- Telemetry & Tracking
- Communications
- Customer Interface

PL#5: Mission Focused Modernization
- Vehicle Integration & Launch
- Horizontal takeoff, horizontal landing (HTHL)
- Vertical takeoff, vertical landing (VTOL)