

# R&T Portfolio Alignment to “Primary” & “Supporting” Center Roles

(Per NPD 1000.3E, v4.0 “The NASA Organization”, December 2021)

## Human Exploration & Space Operations

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### Ground and Launch Services, Processing and Range

Space systems development and operations: launch processing for launch vehicle and spacecraft including processing, servicing, maintenance, command, control, telemetry, launch, landing, recovery; also includes support for processing crew (work to maximize shared equipment with GSFC/WFF); designing, developing, operating, sustaining flight and ground systems and support infrastructure, including integration and testing. Lander ground operations.

### Commercial Services

Space systems development and operations: certification of new commercial launch vehicles to launch high-value civil sector payloads; acquisition of commercial services for **commercial crew missions, launch services and deep space logistics services supporting the Space Launch System, Human Landing Systems and Orion**. Commercial crew systems development and operations.

Ground operations and services: operate, manage, and evolve a multiuser spaceport with infrastructure, systems, and processes to support flight and ground hardware for crewed and uncrewed launch vehicles and payloads.

Storage, Distribution, and Conservation of Cryogenic Fluids and Commodities

**A**

Tools and Techniques for Control, Operation, Inspection, Analysis and Repair

**B**

Environmental and Green Technologies

**C**

Safety Systems for Operations

**D**

Communication and Tracking Technologies

**E**

Robotic, Automated, and Autonomous Systems and Operations

**F**

Operations Support and Advanced Studies leveraging Primary Center Role expertise

**G**

Logistics

**J**

Communication and Tracking Technologies

**K**

Automated and Autonomous Detection and Repair

**L**

### Payload Processing, Integration, and Operations

Space systems development and operations: ISS payload and flight science experiments: processing, assembly, integration, and test

Payload Processing & Integration Technologies (all class payloads)

**H**

### Systems Engineering and Integration

Space systems development and operations: Human spaceflight systems engineering and technical integration, including human spaceflight standards and requirement, space habitability design, and spacecraft human factors engineering.

R&T Technologies on In-Space Platforms

**I**

### Program/Project Management

Commercial Crew Program

Exploration Ground Systems Program

Gateway Program: Deep Space Logistics Project

Launch Services Program

**Commercial LEO Program**

**Orion Program**

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