JOURNEY TO MARS

HUBBLE SPACE TELESCOPE
INTERNATIONAL SPACE STATION
SPACE LAUNCH SYSTEM
ORBITERS
LANDERS
DEIMOS
PHOBOS
MARS TRANSIT HABITAT
MARS

ORION CREWED SPACECRAFT
DEEP SPACE HABITAT
SOLAR ELECTRIC PROPULSION
ASTEROID REDIRECT MISSION

COMMERCIAL CARGO AND CREW

MISSIONS: 6-12 MONTHS
RETURN: HOURS
EARTH RELIANT

MISSIONS: 1-12 MONTHS
RETURN: DAYS
PROVING GROUND

MISSIONS: 2-3 YEARS
RETURN: MONTHS
EARTH INDEPENDENT

NASA
KSC Objectives

1) Maximize NASA Mission Success
   a) Provide ground ops and integration capabilities for exploration
   b) Execute crewed missions to ISS via new commercial crew transportation systems
   c) Continue to acquire commercial launch services for NASA while maximizing success
   d) Sustain and fully utilize ISS
   e) Provide an R&T portfolio to align Agency needs and core capabilities

2) Operate the Multi-User Spaceport
   a) Be proactive to remain the Nation’s pre-eminent multi-user spaceport supporting government and commercial operations

3) Enhance Our Core Capabilities
   a) Optimize the KSC workforce
   b) Provide cost effective and efficient center services to support the Agency mission
Ground Systems Development and Operations Program
O&C High Bay
Multi-Payload Processing Facility
Mobile Launcher
Mobile Launcher Swing Arms at LETF

Orion Service Module Umbilical

Interim Cryogenic Propulsion Stage Umbilical

Aft Skirt Electrical Umbilical
Vehicle Assembly Building
Crawler Transporter
Launch Pad 39B
Building to Exploration Mission-1

Now until launch: 2016–2018

2/2016  Crew Module Pressure Vessel on Dock at Kennedy Space Center

1/2017  European Service Module Delivery to Kennedy Space Center

1/2017  Crew Module Initial Power On at Kennedy Space Center

3/2017  Vehicle Assembly Building High Bay 3 Construction Complete

3/2017  Launch Pad Flame trench Construction Complete

5/2017  Mobile Launcher Ground Support Equipment Install Complete

7/2017  Crew Module and Service Module Mate at Kennedy Space Center

1/2018  Booster Stacking in Vehicle Assembly Building

4/2018  Core Stage stacking with Boosters in Vehicle Assembly Building

6/2018  Orion mating with SLS in Vehicle Assembly Building

8/2018  Wet Dress Rehearsal at Launch Pad

11/2018  EM-1 LAUNCH
Commercial Crew Program
Launch Pad 39A - Future
Commercial Crew & Cargo Processing Facility
Boeing CST-100 Starliner

Artist concept of Boeing’s CST-100 Starliner on Atlas V
Launch Services Program
Launch Services Program Manifest Outlook

2016

- OSIRIS-Rex - Origins Spectral Interpretation Resource Identification Security Regolith Explorer
- GOES-R – Geostationary Operational Environmental Satellite
- CYGNSS- Cyclone Global Navigation Satellite System

2017

- JPSS-1 – Joint Polar Satellite System (Vandenberg)
- ICON – Ionospheric Connection Explorer (Kwajelein)
- TESS – Transiting Exoplanet Survey Satellite
- TDRS-M – Tracking and Data Relay Satellite
- ICESat-2 – Ice, Cloud and Land Elevation Satellite-2 (Vandenberg)
Multi-User Spaceport
Launch Complex 36
Exploration Park & Space Life Sciences Lab

Phase Two (± 139 Acres)

Space Commerce Way

Future Park Expansion

Phase One (± 50 Acres)

To NASA Parkway

Kennedy Space Center

SR-85 Kennedy Parkway

To Kennedy Parkway

Ransom Road

Future Park Expansion
Institutional Updates
Central Campus
Post 2015 Reorganization

Office of the Director

- Commercial Crew Program
- Exploration Research and Technology Programs
- Ground Systems Development and Operations Program
- Launch Services Program

Office of the Inspector General

Center Planning and Development

- Communication and Public Engagement

Office of the Chief Counsel

- Office of Diversity and Equal Opportunity

Office of the Chief Financial Officer

- Engineering
- Information Technology and Communications Services
- Human Resources

Safety and Mission Assurance

Procurement

Spaceport Integration and Services

Significant changes
KSC Historical Workforce Levels

- Peak of Apollo
- Shuttle First Flight
- Post-Challenger Build-Up
- Pre-Challenger Planned Reductions
- Conclusion of SSP & CXP

FY 2015 End:
- Contractors & Tenants: 5,925
- Civil Service: 1,998

Headcount vs. Fiscal Year End

- Civil Service
- Contractors & Tenants
Summary

• We are doing everything we can to make spaceflight more efficient and affordable
  – Enable & leverage commercial capabilities where they exist
  – Leverage government capabilities where commercial capabilities don’t exist

• We have transformed into a multi-user spaceport, and are paving the way on NASA's journey to Mars!