NASA’s WORKFORCE IMPLEMENTATION PLAN

MISSION SUCCESS THROUGH THE STRATEGIC MANAGEMENT OF HUMAN CAPITAL

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Office of Human Capital Management
## National Aeronautics and Space Administration
### Office of Human Capital Management

**Implement Workforce Goals to Enable NASA’s Mission**

### NASA Strategic Goals

<table>
<thead>
<tr>
<th>Strategic Goal 1:</th>
<th>Fly the Shuttle as safely as possible until its retirement, not later than 2010</th>
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<tr>
<td>Strategic Goal 2:</td>
<td>Complete the International Space Station in a manner consistent with NASA’s International Partner commitments and the needs of human exploration</td>
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<td>Strategic Goal 3:</td>
<td>Develop a balanced overall program of science, exploration, and aeronautics consistent with the redirection of the human spaceflight program to focus on exploration</td>
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<td>Strategic Goal 4:</td>
<td>Bring a new Crew Exploration Vehicle into service as soon as possible after Shuttle retirement</td>
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<td>Strategic Goal 5:</td>
<td>Encourage the pursuit of appropriate partnerships with the emerging commercial space sector</td>
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<td>Strategic Goal 6:</td>
<td>Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations</td>
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### Workforce Goal: Ensure a high performing and flexible, mission-aligned workforce.

#### Sub-Goal 1: Understand Mission Requirements.
Integrate Agency-wide workforce planning processes with program and business planning to ensure a flexible, mission-aligned workforce.

#### Sub-Goal 2: Align the Workforce with the Mission.
Optimize mission performance through strategies designed to strengthen technical excellence and leadership capabilities.

#### Sub-Goal 3: Enable Effective and Efficient HR Operations.
Deliver real time information through a system integrated with Agency business processes to support workforce decision making.
NASA’s WORKFORCE IMPLEMENTATION PLAN

1. Understand Mission Requirements

2. Align the Workforce with the Mission

3. Enable Effective and Efficient HR Operations

- Developed in concert with the Mission Directorates, other Mission Support Offices, and the NASA Centers
- Guides and prioritizes all of the work in the Office of Human Capital Management
  - Monitoring and reporting on performance against plan is supported by an automated tracking system
- Aligns with higher level Mission Support Plan and other Agency-level plans, such as NASA Workforce Strategy and Shuttle Human Capital Plan
1. UNDERSTANDING MISSION REQUIREMENTS

Execute a robust, comprehensive workforce planning process to enable the right match of people and program

- Institutionalize workforce planning into the program/budget planning process
- Work with the Centers to maximize the utilization of available workforce and skills
- “Lengthen the reach” of our workforce planning efforts to provide adequate lead-time for Agency decisions and actions

PRIMARY OUTCOMES

Identification of:

- Workforce size/composition misalignments that represent a significant risk to mission success and/or institutional viability
- Specific options and initiatives for mitigating these risks
1. UNDERSTANDING MISSION REQUIREMENTS

<table>
<thead>
<tr>
<th>Completed</th>
<th>Established workforce planning governance structure</th>
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<tbody>
<tr>
<td></td>
<td>Participated in development of Shuttle Human Capital Plan</td>
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<td></td>
<td>Enhanced workforce data tools to identify people with programs</td>
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<tr>
<td></td>
<td>Developed workforce capability measures</td>
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<td>Established a Shuttle Human Capital Council of NASA and contractor HR Directors</td>
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<thead>
<tr>
<th>Near-Term</th>
<th>Institutionalize workforce planning into program/budget planning process</th>
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<tr>
<td></td>
<td>Develop a mapping of the Shuttle workforce to Constellation Program work</td>
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<td>Develop process for periodic WIMS data submissions</td>
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<td>Engage with Mission Directorates and Centers in scenario planning</td>
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<tr>
<th>Long-Term</th>
<th>Work with Mission Directorates to improve planning guidance</th>
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<td></td>
<td>Complete assessments of Center workforce “health”</td>
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<td></td>
<td>Enhance workforce planning capability throughout Agency</td>
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<td></td>
<td>Continue to track, manage Shuttle workforce transition; work with Constellation acquisition process to ensure consideration of workforce issues</td>
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Transition and the Workforce

- **Unique Challenges:**
  - *Retaining Skills* Necessary to Safely Execute Remaining Space Shuttle Missions; *and*
  - *Managing Transition* of Appropriate Shuttle Workforce into Constellation Development; *and*
  - *Retaining Skills* Between FY2010 and FY2014 Necessary to Safely Execute Constellation Flight Operations (Orion/Ares I IOC - 2014)

- **Approach to Ensure Critical Skills Retained:**
  - Provide Challenging, Exciting Follow-on Work in Constellation (and Other Programs)
  - Maintain NASA’s Quality Workplace: Providing Collaborative and Creative Environment, Supporting Career Development, Learning Opportunities

- **NASA is Committed to Transitioning as Much of the Shuttle Civil Service Workforce to Other Agency Programs as is Practicable, Using Strategies such as:**
  - Workforce Sharing, Matrixing, Detailing
  - Retraining
  - Identify Opportunities for Placement of Employees with Needed Skills in Other Organizations

- **NASA is Committed to Working with our Space Shuttle Program Contractor Partners on Workforce Issues.**
  - Unique to Each Contractor Situation and their Known Role in Future Constellation Work
2. ALIGNING THE WORKFORCE WITH THE MISSION

Create, sharpen, and use the tools that are needed to enable current and future employees to support the missions of the Agency

- Strengthen the technical and leadership excellence of the NASA workforce
- Improve the linkage between employee and organizational performance
- Re-shape the existing workforce to better serve future requirements

PRIMARY OUTCOMES

Improvement in the NASA Mission Capability Index:
- Employee motivation
- Employee training
- Understanding of employee roles
## 2. ALIGNING THE WORKFORCE WITH THE MISSION

| Completed | Completed evaluation of leadership development programs  
Inaugurated initial NASA FIRST class  
Developed leadership model and leadership succession plan  
Revise the performance management program to 5-levels |
|-----------|--------------------------------------------------------------------------------------------------|
| Near-Term | Deploying the Individual Development Plans in SATERN  
Expand program and project management training  
Manage transition activities using available tools  
Develop Agencywide career path and mentoring frameworks |
| Long-Term | Deploy Agencywide mentoring to support technical, leadership excellence  
Develop industry fellowship program  
Implement succession management system  
Institutionalize career paths for all technical and support disciplines, including program/project management and systems engineering |
3. ENABLING EFFECTIVE AND EFFICIENT OPERATIONS

Deliver and communicate workforce information for decision-making and provide oversight and accountability to ensure readiness

- Identify and validate user requirements for HR-related data and systems
- Develop and implement high-priority HR information systems
- Develop and implement a robust operations assessment activity

PRIMARY OUTCOMES

- Improvement in the HC Information System Use Index:
  - Managerial use of Human Capital information systems
  - Employee use of Human Capital information systems
  - Decrease in stove-piped, legacy systems
3. ENABLING EFFECTIVE AND EFFICIENT OPERATIONS

<table>
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<tr>
<th>Completed</th>
<th>Developed, deployed informational/transactional web sites (NASA People, NASA Jobs, Employee Orientation)</th>
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<tbody>
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<td></td>
<td>Developed, implemented HC accountability program</td>
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<td></td>
<td>Deploy HR portal to HR community in prep for deployment of HCIE</td>
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<tr>
<td></td>
<td>Developed, deployed Agency-wide HR systems (NASA STARS, PDM, Sattern, NAAS, CMS, NOPS, NEBS, WTTS)</td>
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<tr>
<td>Near-Term</td>
<td>Enhance CMS tool to increase capability for workforce planning</td>
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<tr>
<td></td>
<td>Integrate CMS and Sattern to enable competency-based training decisions</td>
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<tr>
<td></td>
<td>Assess efficiency of Center HC programs</td>
</tr>
<tr>
<td></td>
<td>Enhance WTTS to support HSPD-12, providing authoritative data source for credentialing and personal identity</td>
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<tr>
<td>Long-Term</td>
<td>Deploy HR portal to all NASA civil servants</td>
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<td></td>
<td>Deploy final operating capability of HCIE, establishing personnel data warehouse and integrated subset of info from variety of Agencywide HR systems</td>
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<tr>
<td></td>
<td>Communicate and market HC information system capabilities and benefits</td>
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What is the HCIE?

HCIE is NASA’s Human Capital Information Environment that aligns with the Agency’s Enterprise Architecture and provides:

✓ Authoritative Data Repository (ADR) for HC information
  – Federal Personnel Payroll Information
  – Awards Information
  – Recruitment and Hiring Information
  – Performance Information
  – Training Information and Individual Development Plans
  – Competency Information
  – Workforce Planning Information

✓ Integrated family of systems to support HC processes
  – Integration of Agency-wide systems with Personnel Data Warehouse (PDW)
  – Use of Extract, Transform, and Load (ETL) technology to integrate data from disparate systems into a common language and load it into a data warehouse for maximum useability.
  – Access to the PDW through Workforce Services Portal segmented by communities of interest.

✓ Integrated database to support internal and external systems
  – SAP
  – IDMS and NAMS (personal identity or credentialing systems)
  – Security systems, such as e-QIP
  – EEO systems for diversity reporting
  – Federal Shared Service Centers and OPM
Competency Management System

- The CMS dictionary categorizes the Agency’s corporate knowledge in the form of “competencies”
  Competency management allows you to systematically measure and monitor the Agency’s corporate knowledge base.

- Competencies are used to measure and understand the capability of the workforce
  The CMS provides employees, organizations, and functional communities with the capability to find employees, positions, or projects that utilize competencies. It also helps to show the relationship between what employee’s know, versus what is required to perform a particular job, versus what the workforce requirements are to accomplish the mission.

- Forecasted demand compared with current workforce capabilities enable Senior Executive Leadership to strategically manage projected gaps
  Competency management allows you to make adjustments strategically to meet future program needs. It provides the decision makers with additional information that can be used to set the priorities on various human capital programs, which will result in shifting the knowledge base of the organization to meet the future workforce demands of the agency.

- Integration with employee development programs helps to align training needs with the agency’s workforce plans
  Competency Management will help to integrate the business process and information between workforce planning and employee development. This will enable the agency to more effectively provide training content and employee development activities that are in alignment with both the future strategic direction of the agency, as well as supporting its current mission.

- CMS can help connect the right information to the right employees
  Competency information can help link together people with the same or similar competencies into communities of practice, which can then be connected to information that is relevant to that community. Other resources in the Agency, (such as lab facilities, technology reports, lessons learned, etc.) are able to utilize the competency dictionary as a taxonomy to relate and deliver the right information to the right employees.
Expertise by Project

UPN 374 Shuttle Ground Operations:
- AEROSEN 4%
- ENGSCISUP 5%
- THERMALSYS 6%
- SWENG 7%
- LOGSUPTRAN 7%
- MISEXC 8%
- SYSTEMSENG 18%
- SAMPLE DATA
- TESTENG 16%

UPN 375 Shuttle Flight Operations:
- FLTDGDSYS 5%
- DESDEVENG 3%
- INTEGENG 4%
- MISEXC 5%
- ENGSCISUP 4%
- PROJPROGMT 9%
- SYSTEMSENG 18%
- SAMPLE DATA
- TESTENG 16%

UPN 376 Space Shuttle Projects:
- PROSYS 21%
- PROFRGOM 15%
- STRUCTSYS 6%
- MATSCIENG 10%
- MA 10%
- TESTENG 10%
- ROCKPRO 13%
- SAMPLE DATA

Competency | FTE | Competency | FTE | Competency | FTE
--- | --- | --- | --- | --- | ---
INTEGENG | 76.4 | MISEXC | 160.8 | PROSYS | 65.2
SYSTEMSENG | 70.1 | QEA | 19.2 | PROFRGM | 61.76
TESTENG | 61 | PROFADMO | 19.2 | ROCKETPRO | 55.55
PROJPROGM | 35.1 | BUSMT | 16.4 | TESTENG | 44.9
MISEXC | 30.4 | FLTDGDSYS | 14.95 | MA | 44.7
LOGSUPTRAN | 29 | PROJPROGM | 14.45 | MATSCIENG | 43.2
SWENG | 25.8 | INTEGENG | 13.8 | SYSTEMSENG | 25.6
THERMALSYS | 22 | ENGSCEISP | 11.1 | THERMALSYS | 23.35
ENGSCISUP | 21 | FLTDGDSYS | 9.5 | STRUCTSYS | 21.55
AEROSEN | 16.3 | DESDEVENG | 9 | ENGSCEISP | 21.5
CRYOENG | 14.7 | BITSYS | 9 | DESDEVENG | 19.63
INSFACPLAN | 14.05 | AEROMED | 7.9 | PROFADMO | 18.6
CONMMT | 12.55 | PROJANALYSIS | 6.93 | NONDESSCI | 18.35
PWSYS | 12.25 | CONMMT | 5.9 | PROJANALYSIS | 17.7
BUDGETMMT | 10.4 | ADVTEC | 3 | AEROTHM | 17.2
ELSY | 10.1 | SYSTEMSENG | 3 | BUSMT | 16.52
PROFADMO | 9 | NASALEADER | 2.75 | CONMMT | 13.4
COMNETENG | 6.9 | ADVMIS | 2 | MECSDUR | 13.4
DESDEVENG | 5.6 | ACOUTICS | 2 | AETT | 11.1
NETSYS | 4.25 | TESTENG | 2 | MECHSYS | 10.75

SAMPLE DATA ONLY FOR ILLUSTRATIONS PURPOSES
Management through Competencies Overview

- **SES**
- **P/PM**
- **S/L**
- **ST**

**succession mgmt**

- HIRE
- RETRAIN
- TRAIN
- RELOCATE
- MOVE WORK

**SATERN**

**IDP**

**SHORTAGES**

**SURPLUSES**

**GAPS**

- RETRAIN
  - B/O – E/O
  - Directed Reassignments
  - Attrition Legislation

**Competency Needs**
- Workforce/Budget Planning 1-5 Years

**On-Board Competencies**
- Current Position Competencies

**Competency Dictionary**

**agency**

1. Degree or Depth of competency
2. Transfer of information to Center/HR
3. Policy
National Aeronautics and Space Administration

Plan

UNDERSTAND MISSION REQUIREMENTS
- 7120.5
- PPBE
- Work Requirements

Workforce Implementation Plan

Acquire and Sustain

ALIGN WORKFORCE WITH MISSION
- PERMS
- TERMS
- Education/COOPS
- Pipeline
- Prog/Proj, S&E, Business Core
- Develop
- Retrain
- Reshape
- Transition
- Appraise

Competencies
- CMS
- WIMS

Succession Management
- SES
- ST
- SL

Leadership Development
- SESCPD
- Mentoring
- LDP
- Supervisor

Career Paths
- Formal Training
- IPA/Fellowship
- Mentoring
- Developmental Assignment

Performance Management

Human Capital Accountability System
Center Review - HCIE - W/F Measures

Enable

ASSESS
REPORT
CHANGE

ENABLE EFFECTIVE AND EFFICIENT OPERATIONS
Right People, Right Place, Right Time, Right Cost
Back Up
National Aeronautics and Space Administration
Office of Human Capital Management

Strategic Workforce Planning Governance Structure

Agency Governance Group*

- SMC
- OHCM
  - Toni Dawsey
- OPII
  - Rick Keegan
- PA & E
  - Scott Pace

Operating Teams*

- Workforce Planning Standing Technical Team
- AFNW Technical Team
- Other Risk-Focused Technical Teams

(Agency, MD, Center team membership)

Agency Governance Group
- Surfaces high-risk issues and recommendations to senior management
- Evaluates result of planning activities and redirects resources and efforts to areas of highest priority
- Oversees progress of the operational groups and development of workforce planning capabilities

Operating Groups

WFP Standing Technical Team
- Design, develop and implement WFP guidance and policies
- Synthesize Center analyses to identify Agency workforce risks
- Develop Center WFP capabilities

Risk-Based Technical Teams
- Formed to address a specific issue or risk (e.g., uncovered capacity)
- Team established until issue resolved
- Members can be from WFP Standing team

* OHCM to take lead role in design, development, implementation and functioning of governance and operational groups
MAPPING THE SHUTTLE WORKFORCE

- A team of Headquarters and Center representatives is developing a mapping of the Shuttle workforce to Constellation Program work.

- This document will reflect the planned migration of the employees supporting the Shuttle Program to Constellation work, phased to correspond to key milestones in both programs.

- The first mapping is scheduled to be completed in mid-August.

- It will be iterated and refined regularly after that date, particularly as Constellation Program needs and the Shuttle flight manifest schedules are updated.