



National Aeronautics and
Space Administration

NSTS 60576
REVISION A
AUGUST 5, 2010

Lyndon B. Johnson Space Center
Houston, Texas 77058

REPLACES
NSTS 60576
BASELINE

SPACE SHUTTLE

SPACE SHUTTLE PROGRAM TRANSITION MANAGEMENT PLAN

REVISION LOG

REV LTR	CHANGE NO	DESCRIPTION	DATE
A	2	BASELINE ISSUE (Reference: Space Shuttle PRCBD S063552, dated 4/11/07).	05/09/07
		REVISION A (Reference: Space Shuttle PRCBD S070158, dated 7/12/10) also includes CAR S070158, SSP DOC-685 and Change 1.	08/05/10

CHANGE SHEET

FOR

NSTS 60576 - Space Shuttle
Space Shuttle Program
Transition Management Plan

CHANGE NO. 3

Program Requirements Control Board No. DIR000027/(1-1), dated 10/5/11 and
CAR000047.(1)

October 26, 2011

Evelyn J. Williams
Secretary, Program Requirements
Control Board

CHANGE INSTRUCTIONS

1. Remove the following listed pages and replace with the same numbered attached pages:

<u>Page</u>	<u>PRCBD No.</u>
iii	CAR000047
iv	
v	
vi	DIR000027
ix	DIR000027
x	
2-1	
2-2	DIR000027, CAR000047
2-3	DIR000027
2-4	
4-1	
4-2	CAR000047
5-17	CAR000047
5-18	
5-21	
5-22	CAR000047

5-31	
5-32	CAR000047
6-1 - 6-2 (Add)	DIR000027
A-3	DIR000027
A-4	
A-5	DIR000027
A-6	
B-3	CAR000027
B-4	

NOTE: A black bar in the margin indicates the information that was changed.

2. Remove the List of Effective Pages, dated August 5, 2010 and replace with List of Effective Pages, dated October 26, 2011.
3. Sign and date this page in the space provided below to show that the changes have been incorporated and file immediately behind the List of Effective Pages.

Signature of person incorporating changes

Date

NSTS 60576 - Space Shuttle
Space Shuttle Program
Transition Management Plan

*Revision A (Reference PRCBD No. S070158, dated 7/12/10; CAR S070158, dated 7/21/10 and SSP DOC-685)

LIST OF EFFECTIVE PAGES

October 26, 2011

The current status of all pages in this document is as shown below:

<u>Page No.</u>	<u>Change No.</u>	<u>PRCBD No.</u>	<u>Date</u>
i - ii	Rev. A	*	August 5, 2010
iii	3	CAR000047	October 13, 2011
iv - v	Rev. A	*	August 5, 2010
vi	3	DIR000027	October 5, 2011
vii - viii	Rev. A	*	August 5, 2010
ix	3	DIR000027	October 5, 2011
x	Rev. A	*	August 5, 2010
1-1 - 1-4	Rev. A	*	August 5, 2010
2-1	Rev. A	*	August 5, 2010
2-2	3	DIR000027	October 5, 2011,
		CAR000047	October 13, 2011
2-3	3	DIR000027	October 5, 2011
2-4 - 2-6	Rev. A	*	August 5, 2010
3-1 - 3-2	Rev. A	*	August 5, 2010
4-1	Rev. A	*	August 5, 2010
4-2	3	CAR000047	October 13, 2011
4-3 - 4-8	Rev. A	*	August 5, 2010
5-1 - 5-16	Rev. A	*	August 5, 2010
5-17	3	CAR000047	October 13, 2011
5-18 - 5-21	Rev. A	*	August 5, 2010
5-22	3	CAR000047	October 13, 2011
5-23 - 5-31	Rev. A	*	August 5, 2010
5-32	3	CAR000047	October 13, 2011
5-33 - 5-36	Rev. A	*	August 5, 2010
6-1 - 6-2	3	DIR000027	October 5, 2011
A-1 - A-2	Rev. A	*	August 5, 2010
A-3	3	DIR000027	October 5, 2011
A-4	Rev. A	*	August 5, 2010

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A-5	3	DIR000027	October 5, 2011
A-6	Rev. A	*	August 5, 2010
B-1 - B-2	Rev. A	*	August 5, 2010
B-3	3	CAR000047	October 13, 2011
B-4	Rev. A	*	August 5, 2010
C-1 - C-6	Rev. A	*	August 5, 2010
D-1 - D-10	Rev. A	*	August 5, 2010
E-1 - E-4	Rev. A	*	August 5, 2010
F-1 - F-4	Rev. A	*	August 5, 2010
G-1 - G-12	Rev. A	*	August 5, 2010
H-1 - H-4	Rev. A	*	August 5, 2010

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SPACE SHUTTLE

**SPACE SHUTTLE PROGRAM
TRANSITION MANAGEMENT PLAN**

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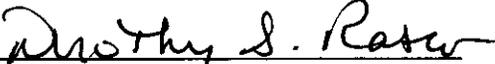
FOREWORD

Efficient management of the Space Shuttle Program (SSP) dictates that effective control of program activities be established. Requirements, directives, procedures, interface agreements, and system capabilities shall be documented, baselined, and subsequently controlled by SSP management.

Program requirements controlled by the Manager, Space Shuttle Program, are documented in, attached to, or referenced in Volumes of NSTS 07700.

Program requirements, specific to transition, controlled by the Manager, Space Shuttle Program, are documented in Volume XX - Book 1 of NSTS 07700. This Transition Management Plan (TMP) defines the management approach to accomplish the Volume XX - Book 1 requirements. The management organizational structure, interfaces, processes, products and tools to implement and manage the Transition and Retirement (T&R) of the SSP capabilities are described within the TMP. The Office of Prime Responsibility (OPR) for the TMP is the SSP Business Management Office (BMO). Changes to the TMP are approved at the Program Requirements Control Board (PRCB) which is chaired by the Manager, Space Shuttle Program.

All elements of the SSP must adhere to these baselined requirements. When it is considered by the Space Shuttle program element/project managers to be in the best interest of the SSP to change, waive or deviate from these requirements, an SSP Change Request (CR) shall be submitted to the PRCB Secretary. The CR must include a complete description of the change, waiver or deviation and the rationale to justify its consideration. All such requests will be processed in accordance with NSTS 07700, Volume IV - Book 1 and dispositioned by the Manager, Space Shuttle Program, on a Space Shuttle PRCB Directive (PRCBD).


Dorothy S. Rasco
Manager, Space Shuttle Program

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1.0 INTRODUCTION

1.1 BACKGROUND

On January 14, 2004, President Bush announced the Vision for Space Exploration (VSE). The first goal of the vision is completing assembly of the International Space Station (ISS) and retiring the Space Shuttle by 2010. In support of this goal, the Space Shuttle Program (SSP) evaluated hardware, infrastructure, and workforce inventories needed to continue Space Shuttle flights through 2010. The SSP also initiated a number of benchmarking and best practices research studies of previous and on-going closeouts within and external to NASA. The closeouts included the United States Air Force Titan IV program, Navy Base Realignment and Closure activities, and the NASA Downey facility. The complete reports of the best practices research studies are available at the Space Shuttle Transition and Retirement website archive section on benchmarking.

In 2006, NASA developed the Human Space Flight Transition Plan pursuant to Section 502(b) of the NASA Authorization Act of 2005. In 2008, NASA revised the transition plan to a joint Exploration Systems Mission Directorate (ESMD) and Space Operations Mission Directorate (SOMD) document, JICB-001, NASA Transition Management Plan. The plan includes a description of how NASA will deploy personnel from, and use the facilities of, the SSP to ensure that the Space Shuttle operates safely through its final flight, and to ensure personnel and facilities from the SSP are effectively used in NASA exploration programs.

1.2 PURPOSE

This document defines how the SSP is organizing and managing the implementation of its end-of-program Transition and Retirement (T&R) to support the VSE and to align with JICB-001. This plan describes the organizational structure, management approach, processes, products, and tools to manage the T&R of the SSP capabilities. The results of the closeout best practices research studies and the deliberations and recommendations of the Integrated Space Operations Summit process were taken into consideration in developing this document. This document will be revised as SSP T&R management organizations, processes, and products evolve.

1.3 SCOPE

This document is applicable to the NASA centers, organizations and personnel involved in the conduct of the SSP T&R. SSP elements/projects are responsible for implementing their project level requirements.

1.4 CHANGE CONTROL

The Program Requirements Control Board (PRCB) has baseline authority for this plan. All changes shall be coordinated through the SSP Configuration Management Process as indicated in NSTS 07700, Volume IV - Book 1, Configuration Management Requirements, Requirements and submitted to the PRCB on the most current version of an SSP Change Request (CR) form.

1.5 GOALS AND OBJECTIVES

The SSP T&R goals and objectives were developed in order to meet the agency's transition goals and the VSE. At the end of T&R, all program capabilities will either be transitioned or retired from the SSP rolls, as those capabilities are no longer required. For purposes of this plan, transition is defined as the process of planning and implementing tasks required to transfer SSP capabilities, in whole or in part, to another program or the institution. Retirement is defined as a form of transition, but for which there is no reuse within NASA. Retired capabilities will be preserved due to historical significance, donated, sold, or scrapped/demolished. (Reference Appendix C for definitions of additional terms.)

The SSP T&R goals are to:

- a. Take no action that will impede the ability to safely and effectively complete the fly out of the SSP
- b. Perform T&R in a cost effective manner
- c. Provide an interface to other programs and institutional elements for capability transition

To meet these goals the following objectives have been identified.

TABLE 1.1
SSP TRANSITION OBJECTIVES

Transition Objectives	Rationale
Maintain flight safety	First and foremost, SSP T&R must not impact safety of flight. Each decision is to be made with a clear understanding of its effect on the risk posture of the SSP and the informed approval of the responsible managers.
Maintain ground safety	SSP T&R must not impact safety of ground support personnel and assets. T&R of ground facilities and tools are also to be assessed for risk prior to execution by management.

TABLE 1.1**SSP TRANSITION OBJECTIVES - Continued**

Transition Objectives	Rationale
Make efficient use of resources	Transition is to strive for expeditious decision-making and implementation to avoid waste, minimize closeout costs, and maximize funding available for follow-on programs.
Preserve critical skills for use within NASA	Human capital planning is to ensure the retention of critical skills and knowledge required for successful fly-out and follow-on programs.
Preserve SSP physical assets for use by other NASA programs	The SSP T&R requirements are to provide good stewardship of NASA infrastructure to facilitate use by other programs.
Preserve critical single-source suppliers for use by other NASA programs	Best efforts are to be made to assure the availability of goods and services needed by follow-on programs in instances of limited or single-source availability and high-risk vendors.
Advise the SSP Planning, Programming, Budgeting, and Execution (PPBE) process	Transition planning and processes are to produce products and guidelines that help shape SSP element/project budget formulation in order to enable transition processes and reduce total SSP program costs as soon as possible.
Manage Environmental Risks	SSP transition plans and processes must identify and mitigate environmental risks and associated tasks to assure environmental laws and regulations as well as NASA policies and guidelines are followed.
Meet legal/Federal Acquisition Regulations (FAR)/contractual constraints	Transition closeout and transfer activities must fulfill contractual obligations and be consistent with FAR.
Meet historical preservation/recordation guidelines	Transition decision-making must accommodate federal, state, and local historical preservation/recordation policies. Transition processes are to ensure historical preservation/recordation is factored into budget formulation.
Maximize stakeholder consensus	Successful transition of the SSP requires buy-in from both external and NASA stakeholders. Decision-making processes are to solicit the views and desires of the stakeholders and provide due process prior to a decision.

TABLE 1.1

SSP TRANSITION OBJECTIVES - Concluded

Transition Objectives	Rationale
Be responsive to political concerns	The SSP and NASA Headquarters (HQ) transition management must provide adequate public visibility into SSP transition planning and decision-making to ensure political issue resolution without undue delay. NASA SSP transition teams generate frequent and substantive status reports to support external requests for information.
Minimize negative impacts to morale	Mission execution and T&R planning and execution are to include measures to minimize adverse impacts to morale. Sensitivity to the concerns of people involved is essential to successful SSP retirement.

2.0 APPLICABLE DOCUMENTS

The latest revisions of the following documents form a part of this document to the extent specified herein.

Volumes of NSTS 07700 (Current Issue)	Program Definition and Requirements Ref. Foreword, Para. 5.3.9
NSTS 07700 Volume II - Book 2 (Current Issue)	Program Structure and Responsibilities, Space Shuttle Program Directives Ref. Para. 5.2.2; Apx. B
NSTS 07700 Volume IV (Current Issue)	Configuration Management Requirements Ref. Apx. B
NSTS 07700 Volume IV - Book 1 (Current Issue)	Configuration Management Requirements, Requirements Ref. Foreword, Para. 1.4, 4.5.5
NSTS 07700 Volume V (Current Issue)	Information Management Requirements Ref. Para 5.3.5.3, Fig. 5-9; Apx. B
NSTS 07700 Volume XV (Current Issue)	Resource Management Policy and Requirements Ref. Para 5.3.9.2

NSTS 07700
Volume XIX
(Current Issue)

Program Risk Management Plan

Ref. Para. 5.3.9.3; Apx. B

NSTS 07700
Volume XX - Book 1
(Current Issue)

Space Shuttle Closeout Requirements,
Transition and Retirement

Ref. Foreword, Para. 4.3.3, 5.3.3.3, 5.3.6, 5.3.10.1,
6.1; Apx. B

NSTS 07700
Volume XX - Book 2,
Appendix 19
(Current Issue)

Space Shuttle Closeout Requirements,
Program Risk Management Plan
Closeout Requirements

Ref. 6.2

NSTS 60575
(Current Issue)

Space Shuttle Program Transition and Retirement
Environmental Plan

Ref. Para. 5.3.3.3; Apx. B

16 U.S.C SS 470et. Seq.

National Historic Preservation Act

Ref. Para. 5.3.4.3

FAR Subpart 4.7

Contractor Records Retention

Ref. Para. 5.3.7

FAR Part 45

Government Property

Ref. Para. 5.3.2; Apx. D

FAR Subpart 52.227-14

Rights in Data

Ref. Para. 5.3.7

FAR Subpart 52.227-16	Additional Data Requirements Ref. Para. 5.3.7
IMSB-Plan-JICB-001	MSFC Transition Management Plan Ref. Apx. B
JICB-001 Signed December 18, 2008	NASA Transition Management Plan Ref. Para. 1.1, 1.2, 4.5, 5.3.6, 5.3.6.5; Apx. B
JICB-002	Transition Implementation Management Plan Ref. Apx. B
JPR 1440.3	JSC Files and Records Management Procedures Ref. Fig. 5-9
JSC 63921 Revision A	Johnson Space Center (JSC) Transition Management Plan Ref. Apx. B
KNPD 1440.1	Records Management and Vital Records Program Ref. Fig. 5-9
MPR 1440.2	MSFC Records Management Program Ref. Fig. 5-9
NASA FAR Supplement Subpart 1845	Government Property Ref. Para. 5.3.2

NASA-STD-8719-13	Software Safety Standard Ref. Para. 5.3.7
NASA-STD-8739-8	Software Assurance Standard Ref. Para. 5.3.7
NPD 1440.6	NASA Records Management Ref. Para. 5.3.5.3, Fig. 5-9
NPD 2820.1C	NASA Software Policy Ref. Para. 5.3.7
NPD 4100.1	Supply Support and Material Management Policy Ref. Para. 5.3.2
NPD 4200.1	Equipment Management Ref. Para. 5.3.2
NPD 4300.1	NASA Personal Property Disposal Policy Ref. Para. 5.3.2
NPR 1441.1	NASA Records Retention Schedules Ref. Para. 5.3.5.3, Fig. 5-9; Apx. H
NPR 2810.1A	Security of Information Technology Ref. Para. 5.3.7

NPR 4300.1	NASA Personal Property Disposal Procedural Requirements Ref. Para. 5.3.2; Apx. D
NPR 4310.1	Identification and Disposition of NASA Artifacts Ref. Para. 5.3.2, 5.3.4.3, 5.3.8.2, 5.3.8.3, 5.3.8.5; Apx. D
NPR 7150.2	NASA Software Engineering Requirements Ref. Para. 5.3.7
NPR 8800.15	Real Estate Management Program Ref. Para. 5.3.2
NPR 8810.1	Master Planning Procedural Requirements Ref. Para. 5.3.2
No Number Dated April 14, 2006	Human Capital Management Plan Ref. Para 5.3.1.2, 5.3.1.3; Apx. B
No Number	KSC Transition Management Plan Ref. Apx. B
SPLN-7100-001	SSC Transition Management Plan Ref. Apx. B
41CFR102 Chapter 36-40	Disposition of Excess Personal Property Ref. Para. 5.3.2
44 USC 3301	Definition of Records Ref. Para. 5.3.5, Fig. 5-9

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3.0 GROUND RULES, CONSTRAINTS AND ASSUMPTIONS

The following groundrules, constraints and assumptions are established to support the development of the approach to manage SSP T&R activities.

- a. Program complete is defined as the successful completion of the manifest while maintaining full confidence in the integrity of the system throughout the schedule.
- b. The SSP will not make T&R decisions that compromise safety to the crew, to ground teams, or to the public.
- c. The mission execution and T&R emphasis is to maintain capability for only as long as it is needed to safely execute the manifest, and then to disposition the capability.
- d. SSP T&R activities utilize existing NASA processes to the greatest extent possible.
- e. SSP T&R will use existing budgetary processes with transition requirements being captured as specific elements under the existing budgetary structure as requirements are identified.

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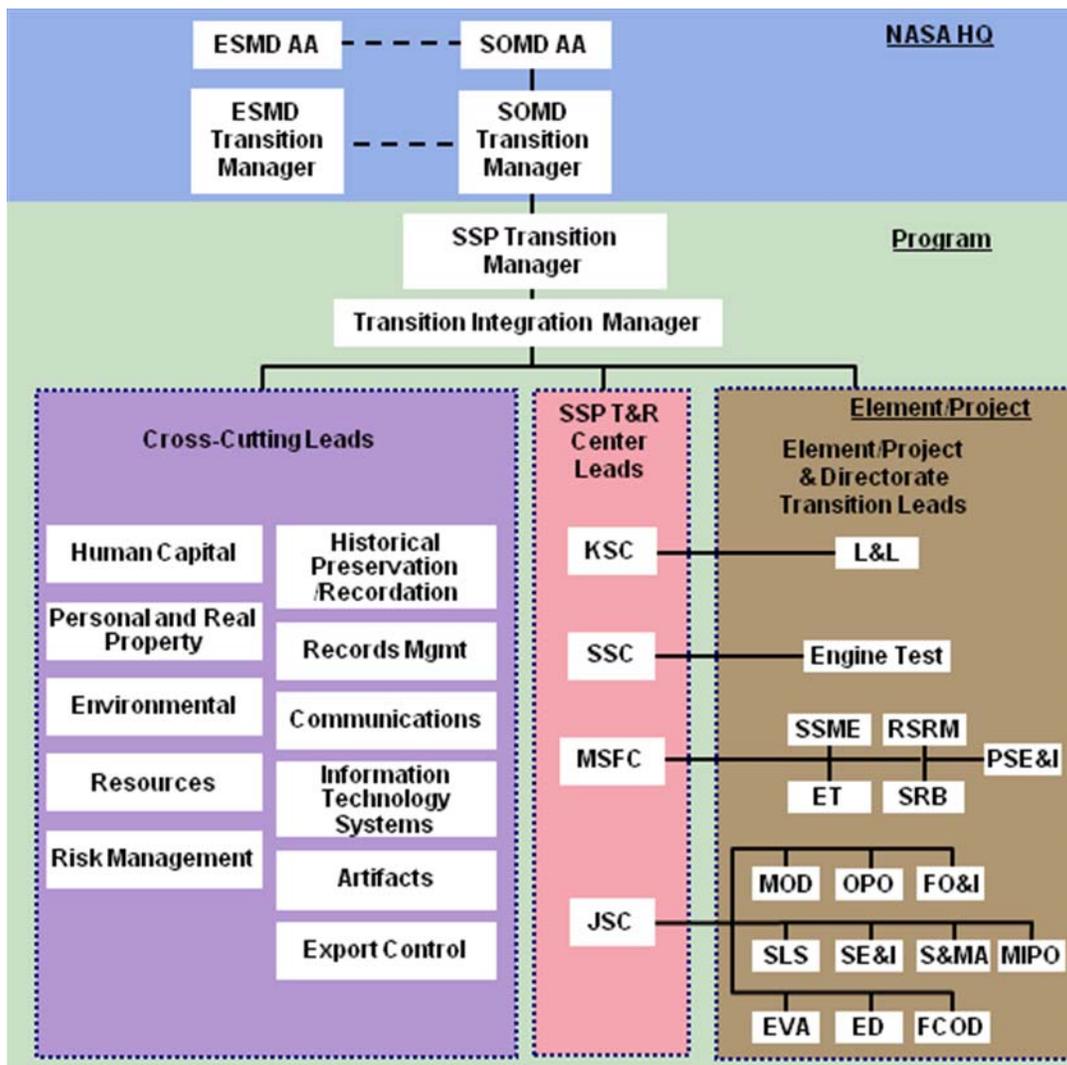
4.0 GOVERNANCE

This section describes the lines of authority and reporting for the SSP T&R activities, including the board structure that provides the forums for managing the T&R components of cost, schedule, technical and risk.

4.1 ORGANIZATIONAL STRUCTURE

FIGURE 4-1

SSP TRANSITION AND RETIREMENT ORGANIZATION STRUCTURE



The T&R organizational structure depicted in Figure 4-1 begins at NASA HQ with the Associate Administrator (AA) and the SOMD Transition Manager. At the program level, the SSP Program Manager has delegated responsibility for the T&R activities to an SSP Transition Manager. Sections 4.2 through 4.5 provide additional detail on the T&R

organizational structure. Not shown in Figure 4-1 are the non-SSP representatives from the International Space Station Program (ISS Program), the Constellation Program (CxP), the HQ Office of Strategic Infrastructure, and the centers.

4.2 NASA HQ T&R ORGANIZATION

Oversight for SSP T&R at NASA HQ is provided through the SOMD. The SOMD AA has assigned an SOMD Transition Manager to oversee the day-to-day T&R issues for NASA HQ. SOMD T&R counterparts in the ESMD are involved in T&R to enable cross-program synergy of capability utilization. Decision-making is supported through the Joint Integrated Control Board (JICB) and the Transition Control Board (TCB) as defined in Section 4.5.

4.3 PROGRAM T&R ORGANIZATION

4.3.1 SSP Transition Manager

The SSP Transition Manager leads the SSP T&R activities. The SSP Transition Manager has primary responsibility for implementation and execution of the SSP T&R including cost, schedule, technical, and risk management. The SSP Transition Manager is the prime interface with NASA HQ for SSP transition reporting and decision requests. The SSP Transition Manager serves as liaison to SOMD for T&R Program-level resource requirements.

4.3.2 SSP Transition Integration Manager

The SSP Transition Integration Manager is responsible for integration of the program T&R planning, management and reporting. The Transition Integration Manager provides direct support to the SSP Transition Manager, coordinates the cross-cutting transition functions defined in Section 5.3, and chairs the Transition Integration Working Group (TIWG) as described in Paragraph 5.2.2.

4.3.3 Cross-Cutting Leads

The cross-cutting transition functions, common to the program, are defined in NSTS 07700, Volume XX - Book 1, Space Shuttle Closeout Requirements, Transition and Retirement.

Cross-cutting leads are assigned to manage, integrate, and assess functional areas common across the SSP that require coordination across multiple centers, elements/projects, directorates, and/or external stakeholders/customers. SSP Business Management Office (BMO) and SSP Management and Integration Planning Office manage the cross-cutting leads. The cross-cutting functions are identified in Table 4.1, and described in more detail in Paragraph 5.3

TABLE 4.1
CROSS-CUTTING FUNCTIONS

SSP BMO	SSP Management Planning and Integration Office
Environmental	Artifacts
Human Capital	Communications
Property Management (Personal and Real)	Export Control
Risk Management	Historical Preservation/Recordation
Resources	Information Technology Systems
	Records Management

4.3.4 SSP T&R Center Leads

Given the unique issues faced by the NASA centers that support the SSP, the SSP Program Manager assigns SSP T&R Center Leads to provide an intermediate level of integration of SSP element/project T&R activities at each Human Spaceflight Center and to provide an SSP T&R interface to center management and institutions that support SSP T&R.

Each SSP T&R Center Lead provides management oversight and integration of the center's SSP elements/projects. Each SSP T&R Center Lead also provides information regarding the status of activities, issues, or other T&R topics to the TIWG, on an as-needed basis.

4.3.5 Representatives from Other Programs

Each SSP element/project assigns a transition lead that is responsible for all transition planning and implementation within that SSP element/project. Responsibilities include, but are not limited to, scheduling, coordination, integration, developing T&R budget requirements in the PPBE submittals, and developing T&R Decision Packages (DPs). A key area of responsibility is to fully integrate all decisions within the element/project and with the institutional stakeholders.

SSP Element/Project and directorate members include:

- a. Engine Test
- b. Engineering Directorate (ED)
- c. Extravehicular Activity (EVA)

- d. External Tank (ET)
- e. Flight Crew Operations Directorate (FCOD)
- f. Flight Operations and Integration (FO&I)
- g. Launch and Landing (L&L)
- h. Management Integration and Planning Office
- i. Mission Operations Directorate (MOD)
- j. Orbiter Project Office (OPO)
- k. Propulsion Systems Engineering and Integration (PSE&I)
- l. Reusable Solid Rocket Motor (RSRM)
- m. Safety and Mission Assurance (S&MA)
- n. Solid Rocket Booster (SRB)
- o. Space Life Sciences (SLS)
- p. Space Shuttle Main Engine (SSME)
- q. Space Shuttle Systems Engineering and Integration (SE&I)

4.4 NON-SSP REPRESENTATIVES

4.4.1 Representatives from Other Programs

The ISS Program and the CxP participate in a number of T&R forums at the agency, program and center levels. This participation encourages open communication of program requirements and schedules for more informed transition decision-making.

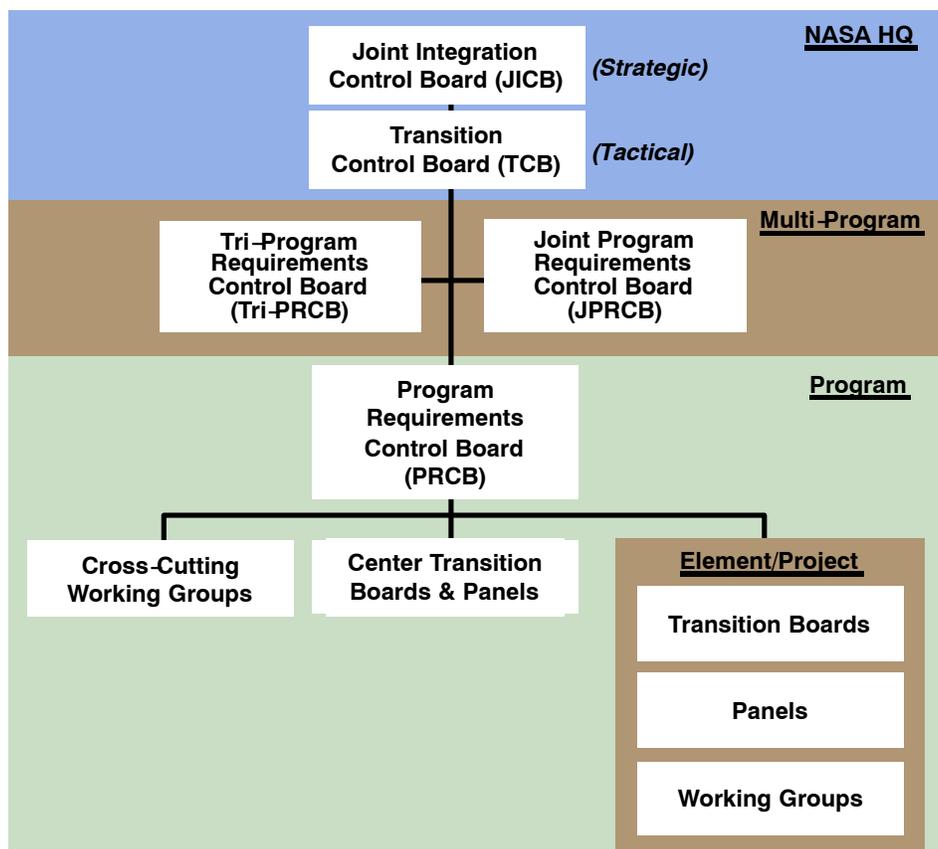
4.4.2 Center Transition Representatives

The institutional support to the SSP is provided by organizations that are managed by the applicable center. Each center has a designated Center Transition Manager that provides integration with the SSP at both the program level and the element/project level. Each Center Transition Manager has developed a center Transition Management Plan (TMP) (available from the center transition websites), and has established and leads a forum to support T&R integration and coordination. The forums are JSC Transition Management Working Group (JTMWG), MSFC Transition Working Group (MTWG), and KSC Transition Working Group (KSCTWG).

4.5 T&R BOARDS AND WORKING GROUPS

A transition-unique board structure at NASA HQ, the centers, and across agency programs is established to manage the T&R activities (reference Figure 4-2). Program working groups are also established to support several of the SSP T&R cross-cutting functions. The SSP elements/projects have the flexibility to create transition-unique boards or to integrate the transition review and decision-making into existing boards.

FIGURE 4-2
T&R BOARDS AND WORKING GROUPS



JICB-001 identifies the need for the SSP, CxP and ISS Program to work together to define an intelligent and efficient transition of capabilities. The interface between programs is provided through membership and participation in various T&R forums. The JICB and TCB forums provide an interface between SOMD, ESMD and the agency's Mission Support Offices for CxP and ISS Program. The cross-program interface is further enhanced through CxP and ISS Program membership and participation in the center-level transition forums.

4.5.1 Joint Integration Control Board

The JICB is a NASA HQ board co-chaired by the AAs for SOMD and ESMD, with the directorate transition manager acting as the executive secretariats. The JICB is a strategic decision-making body that meets on a monthly basis and is restricted to Civil Servant attendance. The JICB:

- a. Focuses on strategic decisions
- b. Ensures the successful integration of development with operations in support of the Exploration Architecture
- c. Establishes and maintains an integrated perspective, drawing on key cross-Directorate, center, and Program leadership to ensure joint strategic direction and decision-making on integrated priorities and risk mitigation strategies, budgets, schedules, and top-level development and operation requirements
- d. Resolves conflicting Directorate priorities, makes decisions, evaluates progress of implementing decisions, and directs required course correction to achieve the decisions goals

4.5.2 Transition Control Board

The TCB is a NASA HQ board jointly chaired by AAs for SOMD and ESMD, and the Assistant Administrator for the Office of Strategic Infrastructure. The TCB is a tactical decision-making body that meets monthly to perform shared program transition planning. The TCB:

- a. Evaluates program transition decisions on SSP resources to ensure efficiencies and synergies are realized
- b. Ensures that mechanisms and timing for transfer of capabilities are in place
- c. Promotes the possible evolution of infrastructure to advance future programs and/or reduce operational cost
- d. Serves as a formal mechanism to ensure adequate cross-Directorate level consideration is provided prior to the formal program divestment of assets considered of no further value
- e. Communicates its activities, as required, to agency governing councils
- f. Performs tactical implementation and decision-making for transition related activities

4.5.3 Tri-Program Requirements Control Board (Tri-PRCB)

The Tri-PRCB is a forum for discussions between SSP, ISS Program and CxP of joint program issues, the final disposition of joint technical and programmatic items and/or

the approval of joint program requirements, agreements, and milestones. It is co-chaired by the program managers of the SSP, ISS Program and CxP.

4.5.4 Joint Program Requirements Control Board (JPRCB)

The JPRCB is a joint program board between two programs: 1) the SSP and ISS Program and 2) the SSP and the CxP. The JPRCB is chartered to resolve joint technical and programmatic issues and/or the approval of joint program requirements, agreements (memorandum of agreement, etc.), and milestones. The JPRCB resolves issues and/or approves joint program baseline documents and changes, such as requirements, agreements, schedules, and rules that are not delegated to a lower authority. The JPRCB is co-chaired by the program managers of the applicable programs.

4.5.5 Program Requirements Control Board

The PRCB is utilized for T&R activities and is chaired weekly by the SSP Program Manager. The PRCB authority, responsibilities and membership are defined in NSTS 07700, Volume IV - Book 1. Transition issues are elevated to the TCB upon direction from the PRCB.

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5.0 OVERALL MANAGEMENT APPROACH/PHILOSOPHY

As the SSP nears retirement, the management approach needs to focus on two major functions to accomplish the goals of the SSP T&R: enhanced mission execution; and transfer and disposal. The separation of these functions allows management to concentrate on their different goals and objectives.

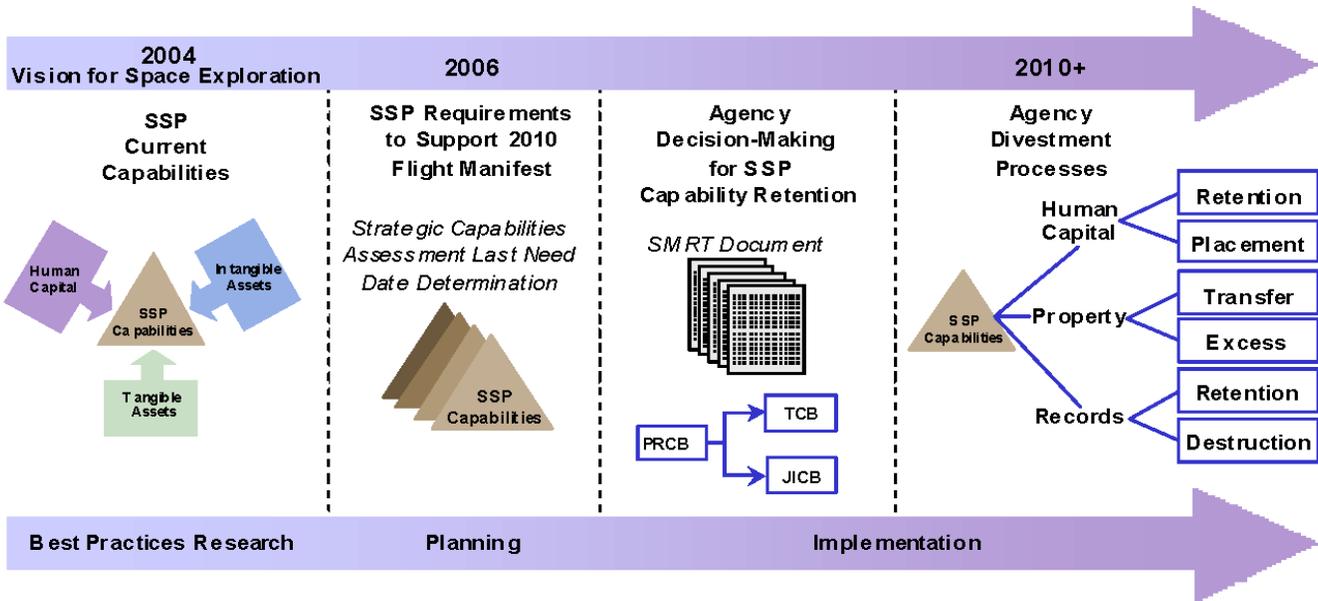
Enhanced mission execution functions are defined as the additional set of activities that are uniquely required due to the program's pending retirement and to safely fly the remaining flights of the Space Shuttle.

The transfer and disposal functions are defined as the program activities needed to prepare for and facilitate transfer or disposal of SSP capabilities and to complete program retirement. To accomplish the T&R functions, processes and tools have been developed to assess the capabilities of the SSP; develop plans to retain, transfer, or excess these capabilities; and then implement those plans (reference Figure 5-1).

The overall approach to a successful T&R process includes the following activities:

- a. Performing best practices research early in the planning process to benefit from predecessor work for major program closeouts or terminations
- b. Identifying the strategic capabilities across the Program which allows decisions to be made relative to a capability - the human capital, tangible assets and intangible assets - recognizing the dependency between the three components of a capability
- c. Evaluating capabilities for the Last Need Date (LND) to support the manifest
- d. Evaluating capabilities that have LNDs prior to the end of the program to ensure release of that capability does not increase risk to mission execution
- e. Implementing disposition decisions following review and approval at the appropriate level board

**FIGURE 5-1
SSP T&R PROCESS**



This figure shows the overall flow of the T&R process along with tools that have been developed to support the process.

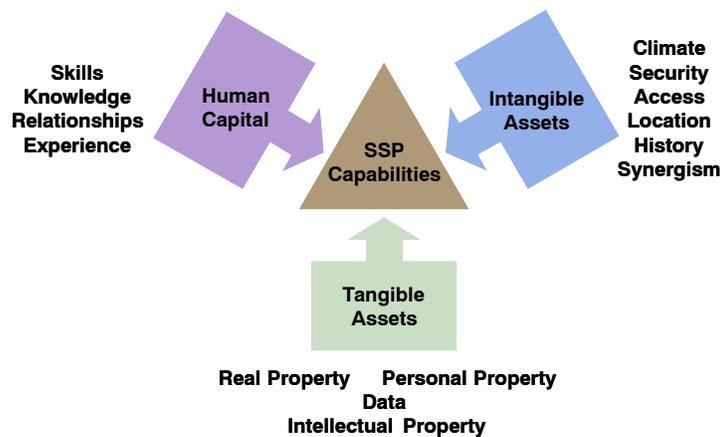
5.1 T&R ACTIVITIES

5.1.1 Planning

Based on the results from the benchmarking and best practices research noted in Paragraph 5.0, the T&R planning begins with identification of the Program’s strategic capabilities (reference Figure 5-1). SSP capabilities are composed of three main components: human capital, tangible assets, and intangible assets (reference Figure 5-2). The combination of human capital and assets provides the SSP with a suite of capabilities that are used to implement program objectives. Performance of a Strategic Capabilities Assessment (SCA) was the first and most important element of the overall SSP T&R effort as it provided the initial review and categorization of SSP assets. As shown in Figure 5-3, the SCA is an enhanced mission execution function that defines capability requirements through the end of the program. The SCA starts with each SSP element/project defining their top-level capabilities in support of mission execution requirements. The SSP elements/projects then perform a risk assessment that defines the LND for each capability while maintaining an acceptable level of risk for operations. The SSP element/project managers make the determination on the acceptable level of risk for mission execution. The capabilities are then assessed for LND and other information used in T&R planning. The elements/projects are responsible for providing and

maintaining the applicable SCA data. An SCA database (Strategic Capabilities Assessment Database [SCADB]) is utilized by the program and elements/projects to document the capabilities of the SSP. (Reference Appendix F for detail on the dataset blocks of the SCADB.)

**FIGURE 5-2
CAPABILITY COMPONENTS**



The combination of human capital, tangible assets, and intangible assets define the SSP capabilities.

Once capabilities and program requirements for those capabilities have been documented in the SCA, management can utilize this information in the decision-making process. In general, these capabilities are assessed and a decision process determines whether to: 1) retain the capability for current or subsequent NASA programs, 2) transfer it to an external agency, 3) preserve it, or 4) dispose of it. The agency’s capability disposition decision process weighs each capability’s value to NASA and to the nation by carefully considering how human capital, tangible assets, and intangible assets can provide value to other NASA programs.

The T&R decision process provides direction and appropriate delegation of authority for decisions associated with the disposition of capabilities released from Mission Execution by SSP element/project managers. To ensure an efficient process due to the large scope of the SSP, it requires decision-making on the release of assets to be made at the lowest level possible. The process does provide mechanisms to elevate issues and decisions to the Program or agency as necessary, as well as reporting of decisions made at the lower levels. The criteria used to determine which level can make decisions include their dollar value, replacement cost, location, political sensitivity, condition, risk, and uniqueness.

The SSP elements/projects control boards provide the first level review of disposition decisions for SSP capabilities. Decisions that are beyond the element/project authority

are elevated to the PRCB following a review by the TIWG. The elements/projects have the flexibility and responsibility for defining their specific review and decision-making process. These are documented in the individual SSP element/project TMPs.

FIGURE 5-3
CAPABILITIES DISPOSITION PROCESS

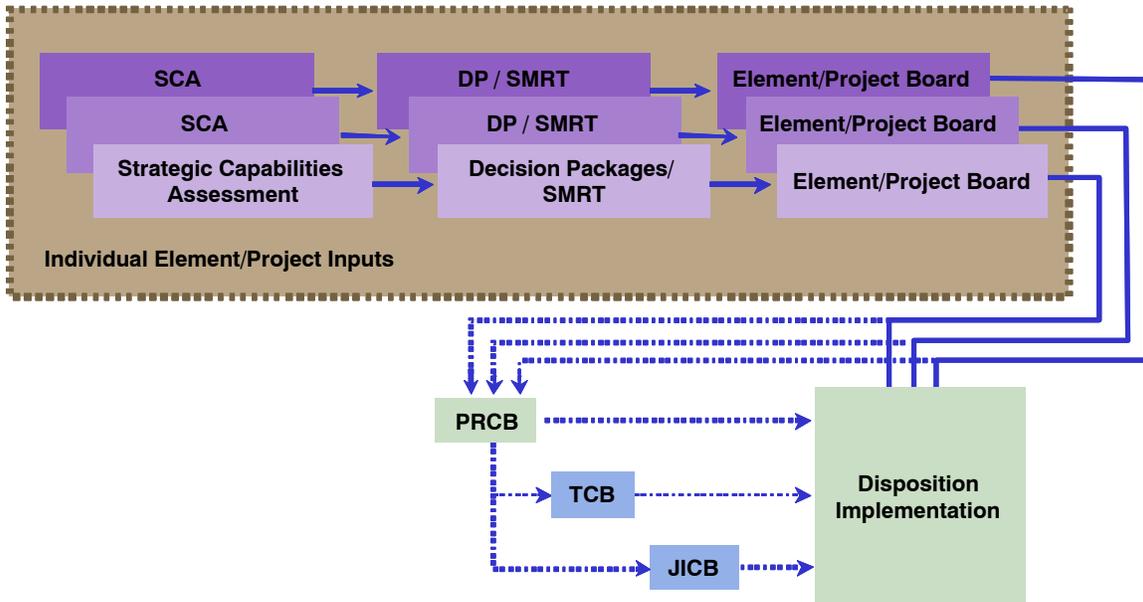


Figure 5-3 provides a detailed functional flow of the capabilities disposition process. It shows the relationship of the various tools utilized for T&R as well as the need to maintain the decision-making authority at the lowest level possible while maintaining reporting to the higher levels.

One of the primary tools used to ensure that credible, consistent, and accurate information is provided to management for decision-making is the Space Shuttle Management Resource Transition (SMRT) document. The document provides a body of relevant information from which decisions are rendered, communicated, and documented. The SMRT document is used to elevate capability decisions to the appropriate approval level and, when required, facilitates decisions about how retained assets will be sustained and funded prior to a new program assuming their costs. In addition, the SMRT document can be called upon in the future to explain why the decisions to either transfer or phase-out of a specific SSP capability were made. The configuration controlled baseline version of the SMRT document is attached as Appendix G. The current version of the SMRT document template can be found the Space Shuttle Transition & Retirement website.

5.1.2 Implementation of T&R Plans

Once a decision is made to transition or retire a capability, the existing institutional processes will be utilized to accomplish this task. Appropriate funding and authority is provided to the SSP elements/projects or host field center to implement the disposition decisions.

The SSP's SCA identifies program real and personal property and human capital assets that are no longer required to successfully fly out the program. These assets enter the disposition process sooner than those that are needed for mission execution. The items that have larger implications for individual institutions, future programs, and national space flight capability will be dispositioned through the agency-wide process, as will eventually all of the mission execution-necessary assets that meet these criteria.

5.2 T&R INTEGRATION MANAGEMENT

5.2.1 Objective

T&R integration management occurs at two levels: 1) the program, and 2) the centers. T&R integration management is required to issue common guidance and direction, and to integrate the element/project information to the extent necessary for the SSP Transition Manager to manage the overall T&R effort.

5.2.2 People/Forums

Quarterly Program Manager's Review (QPMR) - The QPMR is the forum for management review of integrated program-level PPBE status of T&R activities. The SSP Program Manager chairs the QPMR.

TIWG - The program-level integration function is performed by the TIWG. The TIWG is chartered under SSP Program Directive No. 159 (NSTS 07700, Volume II - Book 2, Program Structure and Responsibilities, Space Shuttle Program Directives) and the PRCB, and provides T&R integration support to the SSP Transition Manager. The TIWG is chaired by the SSP Transition Integration Manager and supported by the SSP cross-cutting leads, SSP element/project transition managers, SSP T&R Center Leads, and Center Transition Managers on an as-needed basis.

The purpose of the TIWG is to:

- a. Provide integrated transition management products and services to support proactive management of SSP T&R by the SSP Transition Manager
- b. Facilitate implementation of effective T&R policies, standards, and processes across the SSP

- c. Manage the SCA
- d. Produce a documented record of SSP T&R execution
- e. Manage the production of T&R metrics

Leadership Team - A transition leadership team is comprised of the SSP Transition Manager, the standing members of the TIWG identified in NSTS 07700, Volume II - Book 2 and the SOMD Transition Manager. Ad hoc members participate on an as-needed basis. The transition leadership team provides leadership coordination, targets key issues for resolution, sets strategy, and provides guidance to SSP element/project-level T&R managers.

5.2.3 Process/Tools

The process of T&R integration includes reviewing products, schedule analysis, and generating products for the QPMR. T&R integration status is reviewed at the QPMR. The focused review and NASA team attendance promotes a desired level of integration and coordination.

The tools of T&R integration include websites designed to aid in the T&R integration process. Center-level process and tools are identified in the center transition plans.

The Space Shuttle Transition and Retirement website, a tool available to the greater NASA community, provides a resource for the entire NASA team.

The Transition SharePoint website provides document posting, action tracking, calendars, and on-line discussion capabilities for the transition team and sub teams. The Transition SharePoint website is an access-controlled collaboration tool designed for internal T&R Team use only, and is accessible from the Space Shuttle Transition and Retirement website.

The SCA database website is a secure, web-accessible repository for capturing, maintaining, and tracking the strategic capabilities. The SCA data is “owned” by the responsible organization, and the database reporting capabilities allow the integrated assessment of that data. Additional details on the SCA and SCA database are provided in Appendix F. The SCA database is accessible from the Space Shuttle Transition and Retirement website.

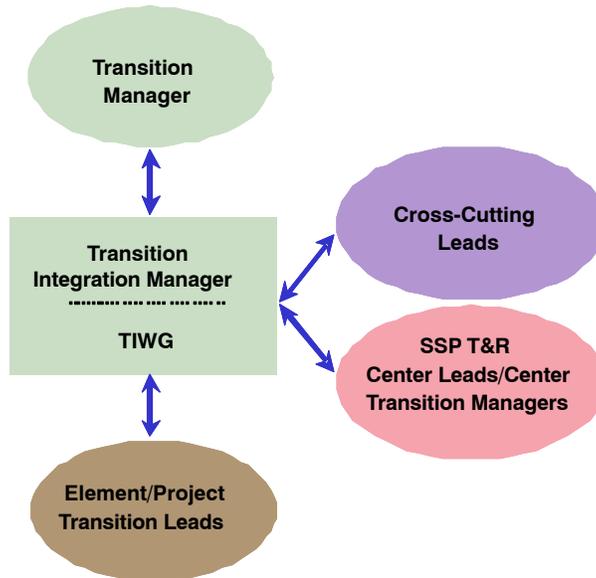
5.2.4 Interfaces

The TIWG is the central point for program-level transition integration (reference Figure 5-4). The TIWG interfaces with the SSP Transition Manager to provide T&R integration support. The TIWG interfaces with the cross-cutting leads, SSP T&R Center Leads,

SSP element/project transition managers and Center Transition Managers to provide templates and requirements, to obtain report status inputs/updates, and to provide feedback on the inputs.

FIGURE 5-4

T&R INTEGRATION INTERFACES



The TIWG is the central point for integration with all T&R interfaces.

5.2.5 Products and Metrics

The Transition Integration Manager produces evaluation reports based on assessments of the SCA data. The assessment factors in program-wide risk assessment and utilizes the baseline Shuttle manifest and launch schedule to determine if there are element/project level LNDs that could impact the program or other organizations. Schedule performance is monitored by tracking and reporting schedule variance and trends.

The TIWG is also responsible for managing the Program's T&R actions.

The primary SSP T&R metrics are defined in Appendix E.

The Center Transition Managers define their products and metrics in the center transition plans.

5.3 T&R CROSS-CUTTING COORDINATION

The program-level cross-cutting coordination is organized around common functions that cross all SSP elements/projects. Each of these cross-cutting functions has defined

lead positions that work to ensure the activities are handled in a consistent and coordinated manner. The cross-cutting functions are:

- a. Human Capital
- b. Property Management (personal or real)
- c. Environmental Management
- d. Historical Preservation/Recordation
- e. Records Management
- f. Communications
- g. Risk Management
- h. Information Technology Systems
- i. Resources
- j. Artifacts
- k. Export Control

5.3.1 Human Capital

5.3.1.1 Objectives

NASA's top priority is safe and successful mission execution through Space Shuttle fly-out. At the same time, the agency must plan for the smooth transition of the SSP workforce to other programs. The SSP has identified retaining critical skills as a Top Program Risk (TPR) for safe and successful mission execution.

5.3.1.2 People/Working Group

Because the transition spans multiple mission directorates, accountability for an effective transition rests with top agency management, supported by program and element/project managers in each mission directorate, and line managers at the centers. Some of the key roles and responsibilities relevant to the SSP workforce transition include:

- a. Human Capital Lead (HCL) - The SSP Program Manager established the position of SSP HCL to maintain insight into human capital status throughout SSP T&R. The HCL's responsibilities include:
 - 1. Develop and implement the SSP Human Capital Management Plan

2. Represent the current condition of the critical skill base (civil service and contractor) that supports the program
 - (a) Establish metrics
 - (b) Characterize risk
 3. Recommend strategies that mitigate the identified risks for civil service positions (e.g., retention incentives, alternative staffing, organization structure)
 4. Recommend strategies to thoughtfully manage employee transitions (civil service)
 5. Review and assess risk mitigation strategies (e.g., retention, alternative staffing) and transition plans for contractor positions
 6. Assess and communicate best practices for critical skill retention and transition
 7. Represent the program in various agency-wide forums and external reviews on human resource planning
- b. SSP Human Capital Working Group (HCWG):
1. Address workforce management issues (led by the HCL)
 2. Serve as the interface between the human capital community and the SSP Program Manager and SSP Transition Manager
 3. Serve as the SSP human capital interface with other programs i.e., CxP, ISS Program, Center Maintenance and Operations
 4. Integrate across all centers (particularly SOMD centers), HQ, and the SSP elements/projects
- c. Agency Office of Human Capital Management (OHCM):
1. Responsible for integrated workforce transition planning and management efforts across the agency
 2. Provide agency-level leadership, expertise, and policy direction in workforce transition issues
 3. Apply agency resources or influence to resolve workforce issues that cannot be solved by centers or programs alone
- d. Center Management and Center Human Capital Officers:
1. Responsible for designing and implementing human capital strategies that ensure mission success

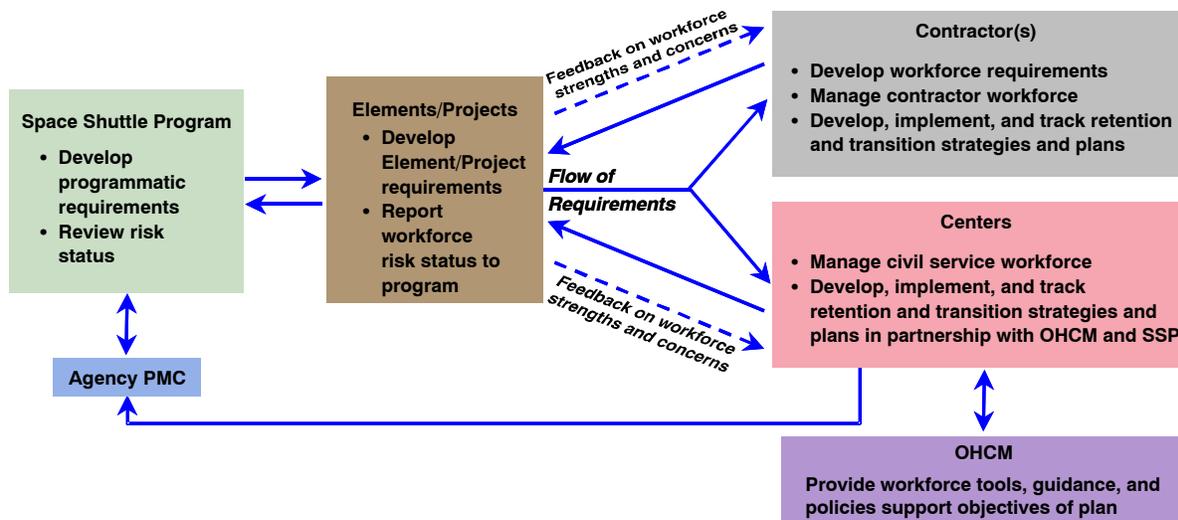
2. Human Capital Officers/Human Resource Directors serve as an advisory group and help integrate human capital strategies for the SSP
 3. Engage mission directorates and agency offices when center efforts are insufficient to resolve civil service workforce transition issues at the center level
- e. SSP Program Manager:
1. Responsible for managing human resources within the program to ensure mission success
 2. Plan for future workforce needs and potential workforce transition costs related to significant program changes
- f. Mission Directorates:
1. Responsible for workforce planning required to support programs and projects
 2. Facilitate smooth, effective transition of workforce through assignment or redistribution of programs/projects/work to centers as appropriate to sustain 10 healthy centers
 3. Provide information on program content to enable centers to determine how to plan for future workforce needs
- g. SSP Element/Project Managers:
1. Responsible for managing human resources within their project to ensure mission success
 2. Identify critical skills needed to safely fly-out the Space Shuttle
 3. Plan for future workforce needs and potential workforce transition costs related to significant project changes

5.3.1.3 Processes and Tools

The SSP Human Capital Management Plan (reference Appendix B for relationship of Human Capital Management Plan to other T&R plans) focuses specifically on the strategies that NASA will implement to ensure retention of critical workforce skills needed for safe and successful mission execution and the smooth transition of Shuttle workforce skills, as appropriate, to the ISS Program, CxP, and other NASA programs. The latest version of the SSP Human Capital Management Plan is available on the Space Shuttle Transition and Retirement website.

The HCL assists the SSP elements/projects with development of their individual Human Capital Management Plans. These plans are consistent with the SSP Human Capital Management Plan, and their focus is on the identification and monitoring of the critical and essential skills needed to successfully complete the mission execution objectives, definition of the skills retention approach, and development of a workforce transition plan. The SSP elements/projects provide project level requirements to the centers and the contractors that are translated into contractor and civil service workforce requirements. The centers and prime contractors develop supporting Human Capital Management Plans. The SSP elements/projects provide feedback to the contractors and centers on their workforce plans, including retention and transition plans and strategies, and report element/project workforce risk status (both contractors and civil service) to the program. Figure 5-5 shows the SSP human capital process for workforce planning.

FIGURE 5-5
SSP HUMAN CAPITAL PROCESS



This figure shows the SSP human capital process for workforce planning to define long-term program management requirements.

Fundamental human capital tools used in SSP T&R are effective communication and collaboration between the key SSP stakeholders, especially the workforce. Keeping personnel up to date on the status of their work, benefits and entitlements, and their follow-on employment opportunities is an essential element of successful mission execution and transition. Active communication will be a key tool used to limit program risk throughout the remaining years of the SSP.

5.3.1.4 Interfaces

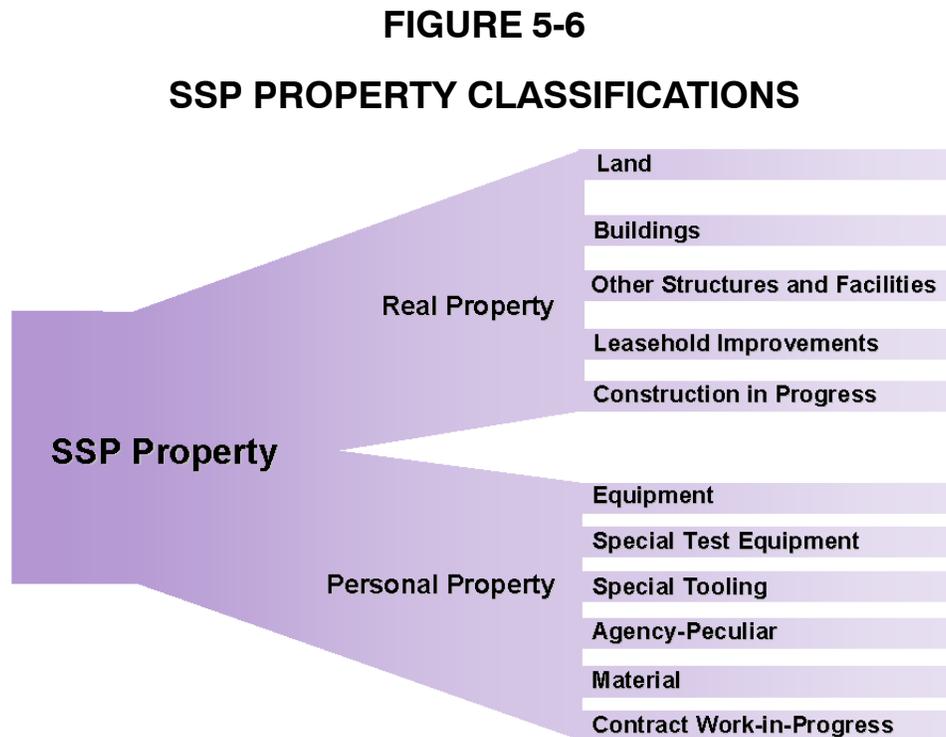
The HCWG interfaces with the human capital community across the agency. The HCWG works directly with the SSP Program Manager and SSP Transition Manager to assist in workforce planning. Additionally, the HCWG integrates across the centers, the SSP elements/projects and other NASA programs to communicate and facilitate smooth workforce transitions.

5.3.1.5 Products and Metrics

The HCL maintains appropriate metrics such as planned vs. actual civil service and contractor workforce numbers, workforce transition to other programs and attrition. These metrics are integrated at the agency, program, and center levels. (Reference Appendix E for further metrics details.)

5.3.2 Property Management (Personal and Real)

Among the tangible assets of the SSP are real property and personal property detailed in Figure 5-6.



The tangible assets of the SSP include real property and personal property.

Real property is defined as land, buildings and other structures and their associated built-in systems that cannot be readily moved without changing the essential character of the real property.

Personal property is defined as all hard assets not classified as real property owned by, leased to, or acquired by the government, to include equipment, material, agency-peculiar property, special tooling, and special test equipment. It includes government furnished property made available to the contractor for use and contractor acquired property for the performance of the contract where the title of the property is vested in the government, including items fabricated by the contractor or its sub-contractors.

Disposition of Government property is controlled through Government documents and regulations to include the following:

41CFR102 Chapter 36-40	Disposition of Excess Personal Property
FAR Part 45	Government Property
NASA FAR Supplement Subpart 1845	Government Property
NPD 4100.1	Supply Support and Material Management Policy
NPD 4200.1	Equipment Management
NPD 4300.1	NASA Personal Property Disposal Policy
NPR 4300.1	NASA Personal Property Disposal Procedural Requirements
NPR 4310.1	Identification and Disposition of NASA Artifacts
NPR 8800.15	Real Estate Management Program
NPR 8810.1	Master Planning Procedural Requirements

5.3.2.1 Objectives

The primary objective of SSP Property Management during T&R is to maintain program integrity while simultaneously implementing the divestiture of program property no longer needed to meet program mission requirements. Prompt disposition of SSP property makes valuable assets available for follow-on programs, and minimizes agency costs for storage and sustainment.

5.3.2.2 People/Working Group

The cross-cutting leads for personal and real property provide the coordination between the institutional property personnel and the SSP elements/projects.

A Personal Property Team (PPT), chaired by the HQ-designated Industrial Property Officer (IPO) and comprised of NASA property managers, is established to coordinate the activities related to the T&R of SSP personal property. The role of the PPT is to:

- a. Advise and assist the SSP Program Manager and SSP Transition Manager with decisions involving disposition of personal property, whether contractor or institutional held
- b. Provide technical support for property disposal cost estimating
- c. Coordinate with HQ on property issues requiring their assistance
- d. Ensure each center understands the policies and decisions from HQ
- e. Share information between other centers' personal property managers on status and progress of disposition
- f. Work with SSP contractors' property managers to ensure they are aware of the requirements
- g. Ensure property systems are able to provide property metrics reports

Center transition plans will address the overall management of real property transition and disposal.

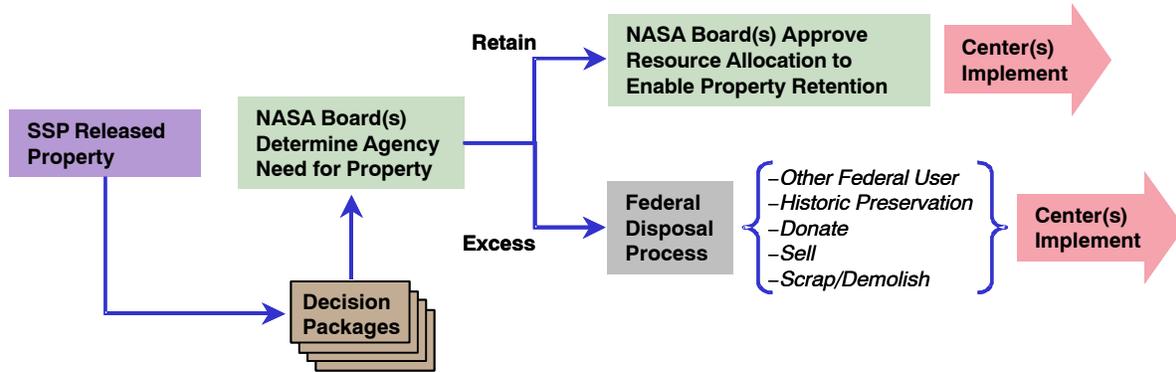
5.3.2.3 Process and Tools

The SCA provides the starting point for property disposition by providing a high-level summary of mission execution requirements captured as capabilities with approved LNDs. Program and HQ approval of capability dispositions, as described in Section 5.0, guides the disposition of property.

A Transition Property Assessment (TPA) was completed in January 2009. The TPA was performed in order to obtain a snapshot of the magnitude and scope of personal property disposition faced by the program. It is also frequently used by external NASA organizations as a starting point for early property screening.

FIGURE 5-7

PROPERTY DISPOSITION PROCESS OVERVIEW



This figure provides an overview of the property disposition process.

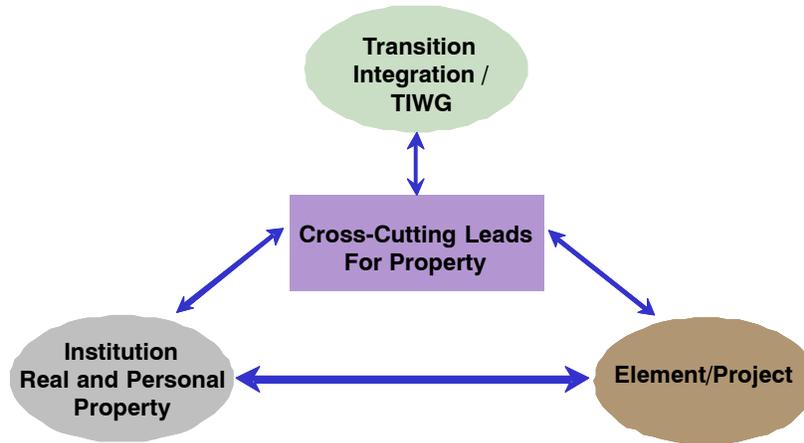
Tactical planning within the SSP program elements/projects identifies specific property associated with each capability and its Release Date (RD) or dates. RDs take into consideration all “make ready” tasks necessary to prepare property for release to plant clearance officers or center property disposal officers. These tasks may include hardware safing procedures, preparation for transportation, artifact assessments, precious metal extraction assessments, International Traffic in Arms Regulations (ITAR)/export control procedures, and environmental clean up or mothballing.

Figure 5-7 shows an overview of the disposition process and Appendix D shows a general process flow for property disposition and disposal. Requirements vary for specific situations and require close coordination between SSP, contractor, and institutional property organizations.

5.3.2.4 Interfaces

The cross-cutting leads for personal and real property coordinate property activities within T&R, working closely with the PPT, the TIWG, the institutional property managers, and the elements/projects (reference Figure 5-8).

FIGURE 5-8
PROPERTY MANAGEMENT INTERFACES



5.3.2.5 Products and Metrics

The products for property management are the responsibility of the SSP elements/projects that hold the property, and the institutional organizations that are chartered to disposition property that is excess to the SSP's needs. Plans and schedules produced by the elements/projects and their prime contractors document the specific release of real and personal property. These plans support a basis of estimate for budget planning and institutional support planning.

The cross-cutting leads for real and personal property are responsible for the gathering, integrating and reporting property metrics. The elements/projects, in coordination with their prime contractors, are responsible for generation of the metrics data. Contractor-held personal property metrics take advantage of existing reporting requirements in the prime contracts. These reports are delivered to the IPOs for each prime contract. The metrics measure the actual disposal of contractor-held personal property. Reference Appendix E for further metrics details. Forecasts of future personal property disposal levels will be generated during PPBE planning cycles.

Nearly all real property under SSP control is located on the NASA centers. The SSP T&R Center Leads, along with center-appointed Center Transition Managers provide management oversight of real property during T&R. Facility usage reviews at each center coordinate SSP LNDs with other current and future customers and identify gaps and overlaps.

5.3.3 Environmental

5.3.3.1 Objective

The environmental objectives of the SSP T&R include:

- a. Enabling mission success by managing environmental responsibilities, identifying and mitigating environmental risks, providing adequate resources and technical support, and working with the mission stakeholders
- b. Compliance with all applicable federal, state, and local laws and regulations properly applicable to federal entities, as well as all applicable NASA requirements
- c. Honoring all agreements with other agencies, industry, organizations, and entities that are relevant to NASA's on-going environmental responsibilities
- d. Addressing environmental considerations in the program and project management processes with emphasis on prevention, conservation, compliance, and restoration

5.3.3.2 People/Working Group

The Environmental Support Team (EST) provides technical support to the planning and implementation of the T&R environmental tasks. Membership in the EST includes agency, center, program, element/project, and prime contractor representation with interfaces to other programs. The intent is to communicate and integrate the environmental issues of SSP T&R with the agency organizations chartered to oversee NASA environmental management.

5.3.3.3 Processes and Tools

Environmental management objectives are accomplished using a risk management approach that builds on the existing environmental organizations, processes, and tools. SSP T&R environmental requirements are identified in NSTS 07700, Volume XX - Book 1. NSTS 60575, Space Shuttle Program Transition and Retirement Environmental Management Plan, has been developed to provide guidance on the requirements. Implementation of the environmental plan uses the expertise of the EST to support the planning and execution efforts concerning environmental risk identification, mitigation, and documentation. Reference Appendix B for relationship of this plan to other T&R plans.

5.3.3.4 Interfaces

Environmental issues associated with SSP T&R are identified and addressed through ongoing communication and cooperation among the SSP, other programs, HQ, and the

centers. The EST interfaces with the stakeholders to facilitate coordination in identifying and resolving the environmental risks.

5.3.3.5 Products and Metrics

T&R environmental products include risk identification, risk mitigation plans, compliance documents, closeout documents, and budget projections. Many of the products are provided as required by specific environmental regulations or government requirements, guidelines, and policies already in place, and may be prepared by organizations other than the SSP. When specific risks are identified, mitigation plans and closeout documentation are prepared.

The T&R environmental plan describes the SSP environmental management metrics to be reported and monitored, and the responsible reporting and monitoring organization. Metrics are collected to help monitor the progress on the environmental risk identification and mitigation. The information is used to help make any process improvements needed to accomplish the overall environmental objectives.

5.3.4 Historical Preservation/Recordation

5.3.4.1 Objective

NASA strives to identify landmarks and properties of historical significance as early as possible in the T&R process to ensure adequate time is available to resolve technical and funding issues and minimize implementation delays.

5.3.4.2 People/Working Group

Historical preservation is an integral part of property management and environmental management. To deal with the historic landmarks a Historic Preservation Working Group (HPWG) is established and is co-chaired by the Office of Strategic Infrastructure's Environmental Management Division and SOMD management at NASA HQ. The HPWG membership includes the Historic Preservation Officers (HPOs) from the four main SSP centers (KSC, JSC, MSFC and SSC), the Management Integration and Planning Office Transition Lead and the component facility (Michoud).

5.3.4.3 Process and Tools

Historical preservation of Government Property is controlled through Government documents and regulations that include the following:

16 U.S.C SS 470et. Seq.

National Historic Preservation Act

NPR 4310.1

Identification and Disposition of NASA Artifacts

The HPWG performed an agency-wide site survey to assess SSP property for historical significance in compliance with 16 U.S.C SS 470et. Seq. and to support the programmatic environmental assessment performed in compliance with the National Environmental Policy Act (NEPA).

5.3.4.4 Interfaces

The HPWG interfaces with the HPOs and the National Park Service, as well as center and SSP representatives for Property Management.

5.3.4.5 Products and Metrics

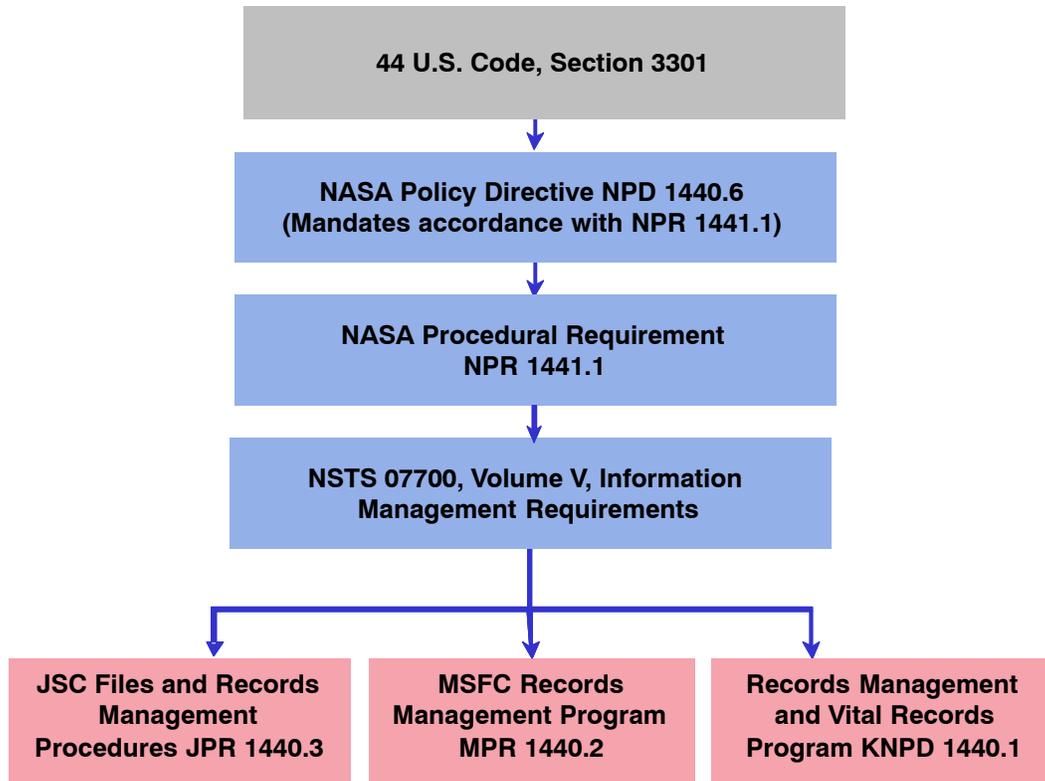
Many of the SSP assets could be considered of historical significance, requiring historical preservation/recordation; however, carrying out such a task would be extremely time-consuming and cost prohibitive. To preclude this scenario, center HPOs establish and define pre-disposition criteria for determining eligibility of assets for listing on the National Register of Historic Places. The HPO conducts appropriate surveys to make these determinations prior to disposition.

5.3.5 Records Management

The definition of records contained in 44 USC 3301, Definition of Records, reads:

“As used in this chapter, “records” includes all books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an Agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that Agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes, extra copies of documents preserved only for convenience of reference, and stocks of publications and of processed documents are not included.”

**FIGURE 5-9
RECORDS MANAGEMENT GOVERNING REGULATIONS**



This figure shows the flow down of regulations that govern records management. NSTS 07700, Volume V provides overarching guidance to supplement the center's records management policies and procedures.

5.3.5.1 Objectives

The records management function in support of T&R is to assure that all SSP records are dispositioned in accordance with applicable regulations in a timely, accurate and cost efficient manner.

5.3.5.2 People/Working Group

The Space Shuttle Management and Integration Planning Office leads the SSP Records Management Working Group (RMWG), and membership in this group includes Records Managers (RMs) from NASA and contractors.

5.3.5.3 Processes and Tools

Good records management requires that as soon as records are no longer needed for operational use, archival needs must be recognized. NPD 1440.6, NASA Records

Management, requires that the NASA installation records management program must be followed to ensure that records are appraised, transferred, and disposed efficiently and economically.

NPR 1441.1, NASA Records Retention Schedules, provides specific direction for both the categorization and retention of records required to preserve the history of government programs. NSTS 07700, Volume V, Information Management Requirements, provides specific SSP direction for Shuttle records management, and documents each element/project inventory and retention schedules. SSP T&R conforms to the existing policy mandates, but also considers ensuring data availability through completion of all SSP activities, and ensuring data availability for other programs, as required. Records disposition is performed using the existing records management policies and processes established in the documents shown in Figure 5-9.

The existing records management process is a robust activity that in the normal course of business and on a continuing basis retires records to the Federal Records Center (FRC). Some contractors also retire government records to the FRC using the same process.

5.3.5.4 Interfaces

The RMWG works in conjunction with the NASA PRCB, the SSP element/project RMs and a National Archives and Records Administration (NARA) representative to assure all SSP records are dispositioned in a timely, accurate and most cost efficient manner.

The SSP elements/projects interface with the Space Shuttle Management and Integration Planning Office to ensure that their records are reviewed by the SSP prior to dispositioning to determine whether other SSP elements/projects or NASA programs require access to this data for operational purposes. If another project/element or NASA program requires the data, arrangements will be made to provide either copies of the records or transfer of the records to the requesting project/element or program. Any records transfer must be coordinated with Agency and Center Records Management following the policies and procedures established by each center and identified in Figure 5-9.

5.3.5.5 Products and Metrics

The SSP RMWG provides:

- a. Communications with all elements/projects involved in SSP T&R activities
- b. Records management guidelines and groundrules
- c. Resolution of issues common to multiple elements/projects

- d. Strategies for effective and efficient transfer of records to appropriate storage and/or other programs

5.3.6 Communications

The successful completion of mission execution rests primarily on performance of SSP civil servants and contractor personnel. The challenge of T&R management is to maintain morale and limit attrition in a “going out of business” environment. As was noted in best practices research, keeping personnel up to date about the status of their work, their compensation, and their follow-on employment opportunities contributes to successful base and program closures. Therefore, the agency has documented a requirement for an SSP T&R communications strategy in the following sources:

- a. JICB-001
- b. Program Commitment Agreement
- c. NSTS 07700, Volume XX - Book 1

5.3.6.1 Objectives

The primary objective of the SSP T&R communications effort is to inform the SSP workforce about the activities, intentions, and goals related to successful retirement of the SSP and transition to new work. In effect, the effort consists of:

- a. Communicating “down and in” to the SSP workforce within the context of SOMD/agency communications strategy
- b. Providing content and support as needed to other NASA entities and stakeholders

5.3.6.2 People/Working Group

Strategic communications planning is managed by the Management Integration and Planning Office. Development of the communications strategy and products are the responsibility of the Management Integration and Planning Office and the SSP Transition Communications Lead. The SSP Transition Communications Working Group has been established to formulate and generate these communications products. This working group consists of communications representatives from the affected centers and Shuttle prime contractor companies.

5.3.6.3 Processes and Tools

The high-level process used by the communications team to identify and develop content for communication is described as follows:

- a. Input - The team gathers input from various sources throughout the agency. These sources include, but are not limited to: human capital transition team members, transition boards, workforce focus groups, policy statements, customer feedback, center leads, and transition cross-cutting leads.
- b. Integration - The team consolidates input gathered from all sources and subjects the information to analysis designed to answer the following questions: is the information complete and relevant; is there a specific community or target audience identified; what tools are most appropriate to convey the content; etc. Additional research is done to complete or expand on the input, as needed. Input is then formatted to become the specified product.
- c. Distribution - The team distributes the product to the intended community through the singular or combined use of tools including websites, briefings, brochures, video presentations, publications, and management all-hands. Existing agency or program communications tools are used to the maximum extent.

5.3.6.4 Interfaces

In order to achieve a successful strategic communications plan, a coordinated effort between all levels of NASA management is necessary to provide timely, frank, and complete information to the primary audiences, which include civil service and contractor employees, suppliers and vendors, executive and legislative branches of government, local communities, special interest groups, and the public. Active communication is vital for limiting program risk throughout T&R.

5.3.6.5 Products and Metrics

SSP Transition communications products can be logically divided into two major areas.

- a. Preplanned - Those products maintained on a consistent schedule, and examples are:
 - 1. Quarterly online “magazine” -- Rendezvous
 - 2. SSP news articles
 - 3. Monthly activity report
 - 4. Regular website posting and maintenance
- b. Event-driven - Those products that are developed specifically due to a transition related activity or development which is not regularly scheduled, such as:
 - 1. Talking points or charts for managers’ all-hands meetings
 - 2. Policy updates (JICB-001, Human Capital Transition Plan, legislation)

3. SCA scheduled events (vendor shutdown, Pad B)
4. SSP contributions to partnering events (human capital, Public Affairs Office [PAO], HQ)

Through the capture of metrics and trending data, communications products are under continuous assessment for effectiveness. Metrics are identified in Appendix D and include data analysis from the annual human capital survey given to the SSP workforce, web-based feedback forms, workforce focus groups, and website usage statistics.

5.3.7 Information Technology (IT) Systems

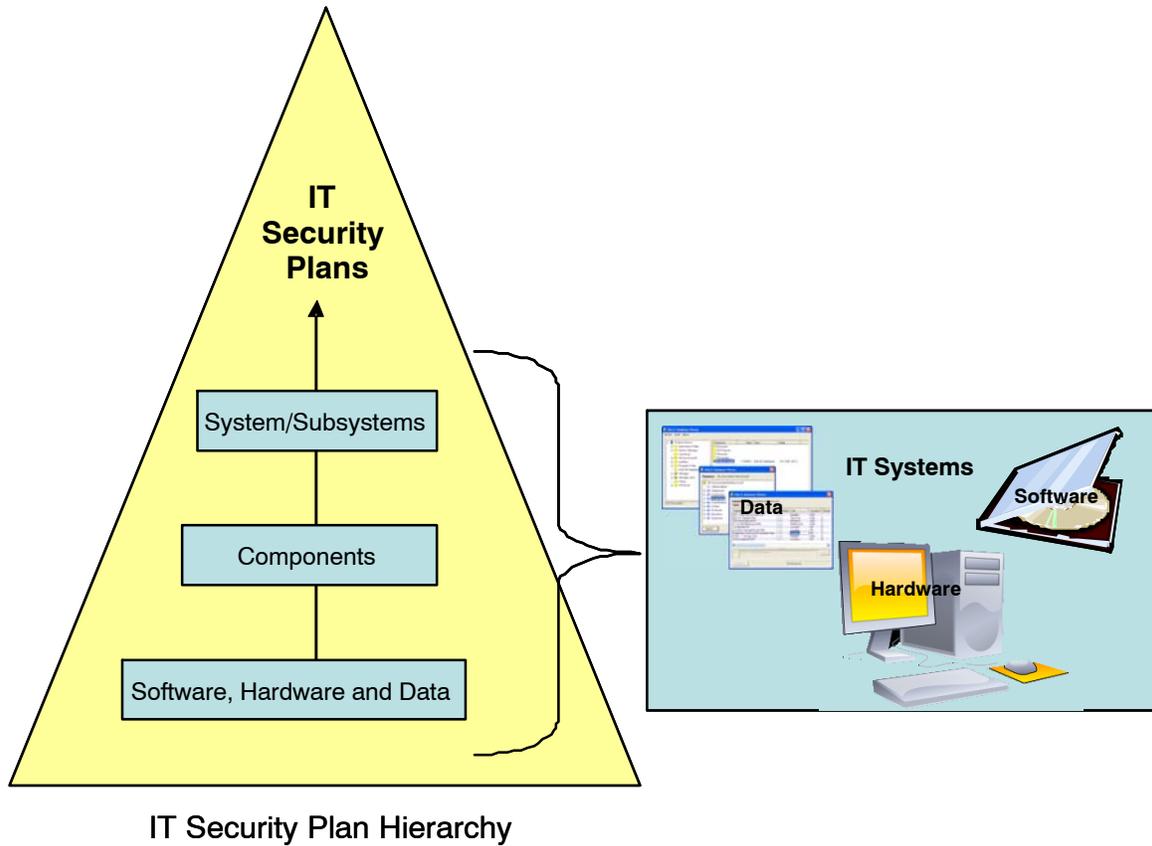
SSP T&R requires that the supporting SSP IT systems be dispositioned. Over the years, many IT systems have been interconnected and have become interdependent in order to reduce operating costs for the SSP.

In the disposition of IT systems, IT Security Plan content is used as a resource to identify and to assess all of the IT resources and interdependencies of IT hardware, software, and associated information. The content of hardware and software inventories provides data relevant to the assessment of IT resources and their interdependencies.

Figure 5-10 shows the hierarchical structure and relationships of the subsystems, components, and configuration items within a typical IT Security Plan.

FIGURE 5-10

TYPICAL IT SECURITY PLAN HIERARCHY



In addition to other references found in this document, the following documents are considered in IT Systems disposition.

FAR Subpart 4.7	Contractor Records Retention
FAR Subpart 52.227-14	Rights in Data
FAR Subpart 52.227-16	Additional Data Requirements
NASA-STD-8719-13	Software Safety Standard
NASA-STD-8739-8	Software Assurance Standard
NPD 2820.1C	NASA Software Policy
NPR 7150.2	NASA Software Engineering Requirements
NPR 2810.1A	Security of Information Technology

5.3.7.1 Objectives

The primary objective of IT systems management for T&R is to provide cross-cutting integration among centers, programs, and elements/projects to ensure that all IT systems remain available to support missions and closeout requirements, and are made available for continued use by other organizations as required. In addition, cross-cutting integration helps to achieve data-driven decision making, disposition progress and closed-loop accountability.

The implementation of a smooth T&R of the SSP's IT systems requires integrated assessment, detailed planning, and broad coordination between users and system owners. This section identifies the approach for an integrated T&R of IT without compromise to on-going operations of existing programs or the closeout of the SSP. Additionally, support required by elements/projects to execute the NASA-directed disposition (transfer, archival or destruction) of government-owned IT assets is identified. All IT investments will be identified with a disposition status of excess. As repurposing or transitional opportunities are identified, the status will be updated to reflect the disposition.

5.3.7.2 People/Working Group

The SSP IT Cross-Cutting Lead facilitates the integration of requirements among the IT community, SSP T&R leadership, and the elements/projects via the Information Technology Working Group (ITWG). The IT Cross-Cutting Lead supports NASA boards and panels and provides information generated by the ITWG, as appropriate and as needed.

The IT Cross-Cutting Lead will:

- a. Coordinate the communication of requirements, directions, and actions across NASA centers, programs, and elements/projects, as necessary, to ensure a broad understanding of systems' interdependencies and interfaces and to facilitate the identification of issues, concerns, funding requirements, and funding sources
- b. Ensure any issues with planned system shutdowns are thoroughly explored, understood, and mediated between the affected stakeholders
- c. Monitor the partnership between pertinent organizations involved in the determination of dispositions for IT systems; particularly, those systems with multiple interdependencies and interfaces across multiple sites
- d. Coordinate the final disposition of IT systems at the security plan level and assess progress against IT systems disposition performance measures

- e. Collect information into a consolidated IT report for review and assessment, and status IT systems dispositions as requested
- f. Chair the ITWG

The ITWG which includes participation from elements/projects, institutions, HQ Chief Information Officer (CIO), and the supporting contractors will:

- a. Ensure that all IT systems remain available to support missions and closeout requirements, and are made available for continued use by other programs as required
- b. Provide technical expertise for the development of integrated assessments and recommended dispositions support of program and institution decisions
- c. Facilitate IT planning and disposition between the Systems Owners, IT Security, Information Management, Real and Personal Property Management, Records Management, Procurement, and Security, as needed

All system owners are responsible to plan, manage, and execute the transition of IT systems in response to NASA direction.

5.3.7.3 Processes and Tools

Organizations should ensure that all transition assessments and dispositions are the result of integrated, cost-effective decision-making based on current information. IT transition planning includes the appropriate mechanisms for closed-loop accountability as well as the requirement to produce and maintain the objective evidence that is necessary to verify that all IT is appropriately transitioned. Progress in the disposition process is tracked via metrics provided by the T&R database maintained by the ITWG members or their designated representative.

The systematic disposition of IT systems follows an approach which begins with the identification of applicable security plans, IT systems, applications, records, data, and the collection of last need events and dates. This information is housed in the Transition and Retirement Information Technology (TRIT) database. Each SSP element/project is required to collect and populate the TRIT database. The last need events and dates for software applications and records affect the disposition determinations for the associated hardware.

TRIT is the data repository/warehouse and is used to support the integrated assessment of software, hardware, and to identify when records are removed from a system. The confirmation of records removal is the first step in ensuring the integrated assessment of software and hardware, and supports the final IT systems disposition recommendations at the security plan level.

The cross-cutting lead works with the elements/projects via the ITWG to determine the appropriate disposition recommendations for IT systems and to identify any risks. Stakeholders who are involved in the IT Security and system ownership ensure the thorough review of all interdependencies. The ITWG representative from each SSP element/project ensures the status is current in TRIT for their transition of investment. In the event of a conflict between the ITWG representatives, in terms of shutdown or disposition, the IT Cross-Cutting Lead, works with the ITWG representatives to resolve any issues. Issues which cannot be reconciled by the IT Cross-Cutting Lead will then be presented to the TIWG for assessment.

Once final disposition direction is received from the SSP element/project boards and panels, the elements/projects implement the direction in accordance with approved policies and procedures. Formal disposition agreements of IT investments come when a funding code for the receiving organization is identified. This identification is on the disposition tab in the TRIT database. Requirements vary for specific systems and require close coordination among SSP, contractor, and institutional organizations. When the disposition of records is complete, the IT hardware and software, system owners will begin their respective disposition process (transitioned, archived, or excessed).

IT systems owners manage the disposition of the IT systems as well as the disposition of pertinent security plan content. When it is cost-effective and feasible, the IT systems owner disposes a system in its entirety, inclusive of all subsystems, components, and configuration items (hardware, and software).

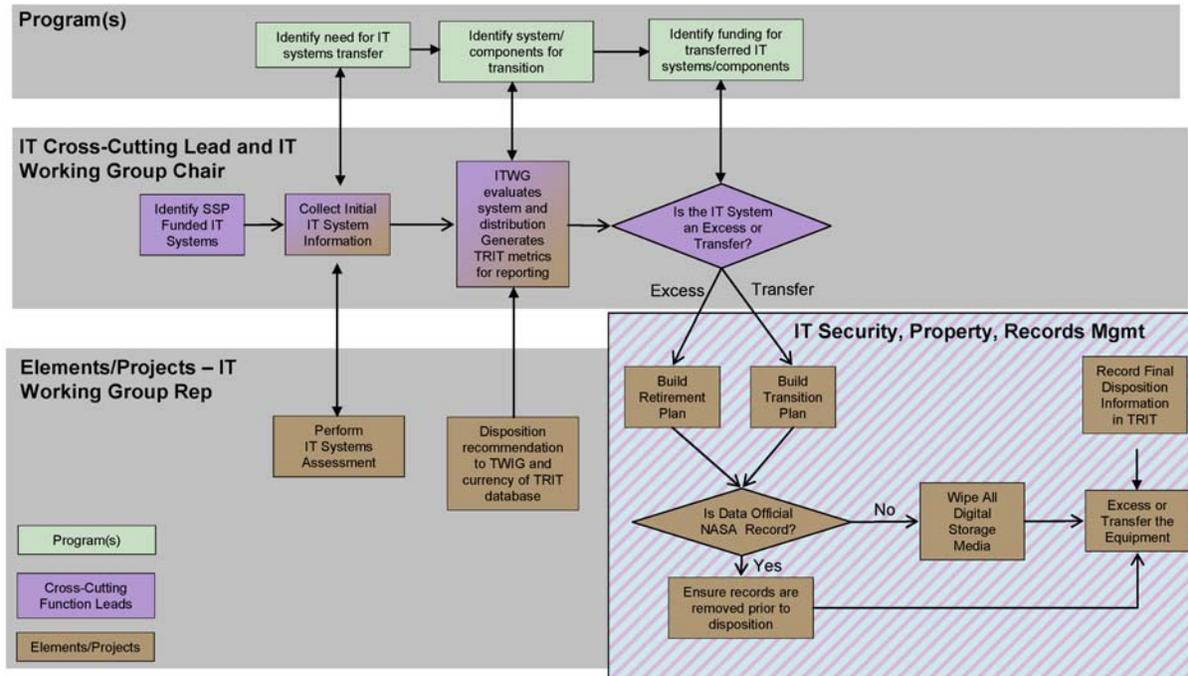
5.3.7.4 Interfaces

The IT Cross-Cutting Lead coordinates an integrated assessment and disposition of IT systems in alignment with security plans by working with the ITWG membership and the TIWG.

IT systems are highly interdependent with other functions and resources such as procurement, records management, real property, and institution resources. Therefore, IT systems disposition involves the full partnership with these other cross-cutting functions and resources as well as the application of records management and property management policies and procedures cited in other sections of this document.

Figure 5-11 shows the management interfaces that support integrated decision-making and reporting for IT systems dispositions.

**FIGURE 5-11
MANAGEMENT INTERFACES IN SUPPORT
OF THE IT SYSTEMS DISPOSITION**



5.3.7.5 Products and Metrics

The IT Cross-Cutting Lead coordinates the collection, integration and review of data used to support the IT systems disposition process, oversees the disposition of IT systems by security plan, and reports progress to the TIWG.

IT T&R schedules, metrics, and reports provide information to track and status the disposition for IT systems. Funding requirements for the actual disposition of systems is provided by the respective element/project as defined by SSP PRCB Directive S070128.

5.3.8 Artifacts

5.3.8.1 Objectives

NASA, in cooperation with the General Services Administration (GSA), will conduct an early prescreening process to provide an opportunity for potential artifact recipients to plan for facility requirements and budget for costs associated with receiving the artifacts allocated to them. This planning period is particularly important for larger artifacts

which may have complex logistical and installation requirements. NASA's ultimate goal is to ensure that historically significant Shuttle hardware is preserved.

5.3.8.2 People/Working Group

The Space Shuttle Program Artifacts Working Group has been established to develop an overall approach for artifacts prescreening and criteria for making artifact determinations and placement decisions in accordance with NPR 4310.1, Identification and Disposition of NASA Artifacts. The working group and artifacts prescreening activity is led by the NASA Headquarters Office of Strategic Infrastructure. The SSP provides representation and identification of potential artifacts to the working group.

5.3.8.3 Processes and Tools

NASA HQ is partnering with the GSA to develop a web-based tool that will be used to conduct prescreening of SSP artifacts by internal and external entities with the goal of making early predeterminations on the placement of artifacts.

The artifact prescreening process will provide eligible recipients an early opportunity to request Shuttle artifacts for their respective space artifact collections. Artifact prescreening occurs prior to the item being declared excess and is followed by a pre-decisional determination for placement with a particular recipient. Notification that a pre-decisional determination has been made enables a potential recipient to design a collection theme, build a support infrastructure as needed, and plan the ultimate receipt of the artifact post program closeout.

SSP Property that is prescreened in the NASA/GSA SSP Prescreening portal and not requested by a potential recipient is no longer treated as a potential artifact. In this case, the property is declared excess when the program ends, enters the disposal process as Exchange Sale property, and is disposed of in accordance with NPR 4310.1. The regular property disposition process provides a second opportunity to identify SSP artifacts, however, this effort happens after the property is declared excess (when no longer needed) and minimizes the strategic planning opportunities for potential recipients. The NPR states that the Center Property Disposal Officers, working with their respective PAOs, will assist program and project managers to determine which items may qualify as artifacts during the disposal process.

5.3.8.4 Interfaces

The web-based prescreening tool will serve as the interface between the Space Shuttle Program Artifacts Working Group and potential artifacts recipients. NASA centers, NASA Visitor Information Centers, and the Smithsonian National Air and Space Museum (NASM) will have the first opportunity to request SSP artifacts. Following the

internal prescreening activity with the entities mentioned above, other government agencies, museums and all other qualified institutions will have an opportunity to request SSP artifacts using the same prescreening tool. Museums and educational institutions will work through their State Agencies for Surplus Property to gain access to the prescreening tool. All SSP artifacts contributions are coordinated through the SSP Artifacts Working Group and then conducted by Property Management in accordance with the applicable NASA and government documents, regulations, and policies.

Following the end of the final prescreening activity, the NASA/GSA SSP prescreening tool will be evolved into a new web-based tool that will be used by Center Property Disposal Officers to screen potential artifacts as a part of the regular property disposition process. This process will ensure continued increased visibility and access to NASA artifacts by eligible recipients throughout the United States (U.S.).

5.3.8.5 Products and Metrics

Potential Space Shuttle artifacts are being identified in accordance with guidance provided in NPR 4310.1. Several sources of information are serving as resources for artifact identification:

- a. An Agency-wide “wish list” of Shuttle hardware has been compiled by the field center PAOs, Visitor Information Centers, and the NASM. This list is intended to serve as a baseline of what is considered a desirable “potential artifact” among the museum and NASA Visitor Center communities and NASA education and public outreach functions.
- b. A TPA of Space Shuttle personal property will be used to identify potential artifacts including flown and non-flown hardware, as well as ground support and training hardware, tools, and equipment.
- c. The Orbiter Project provides a recommended list of potential artifacts at the line replaceable unit/assembly level. This approach ensures that significant Orbiter hardware, flight spares, and flight crew equipment are identified as potential artifacts.

The SSP will provide the final listing of personal property recommended as potential artifacts for prescreening, including all designated information on these items as requested by NASA HQ.

5.3.9 Other Cross-Cutting Functions

Several T&R cross-cutting functions have been realigned to follow routine program processes. Requirements for these functions follow processes established in NSTS 07700 documents.

5.3.9.1 Export Control

The SSP recognizes its responsibilities to comply with export control laws and regulations. Export control is an institutional function that is managed by the host center. Support to the SSP T&R activities regarding property, artifacts, IT systems, records management, and any other activity involving export controlled assets is provided by the applicable center's Export Control Office. The SSP works with the Export Control Offices providing technical information or clarification, as needed, to ensure compliance with export control requirements.

5.3.9.2 Resources

Resources planning and implementation for T&R activities have been integrated into the processes outlined in NSTS 07700, Volume XV, Resource Management Policy and Requirements. Each element/project is required to address T&R resource requirement as a part of the SSP PPBE process.

5.3.9.3 Risk Management

Risk management interfaces with all levels of T&R and external risk owners. Risk management interfaces with the SSP Transition Manager, the SSP Transition Integration Manager and the SSP elements/projects as part of the normal risk reporting and review process established in NSTS 07700, Volume XIX, Program Risk Management Plan.

All members of the program are responsible for identifying and capturing risks. The existing Shuttle Program risk management process, including the Shuttle Integrated Risk Management Application (SIRMA) tool, is used for T&R risk management. T&R risk reviews are conducted as an integral part of the current Program risk review process and the PRCB.

5.3.10 Elements/Projects

5.3.10.1 Objectives

SSP element/project offices are responsible for planning and executing T&R within their focused area of expertise. Strategic direction and oversight remains with the Program. The overall objective is to achieve the SSP T&R goals and objectives consistent with the requirements identified in the NSTS 07700, Volume XX - Book 1 and this management plan.

5.3.10.2 People/Working Group

SSP elements/projects are responsible for implementing the project-level requirements. Each element/project identifies a transition lead. The element/project transition lead is

responsible for overall planning and managing of their T&R activities including coordination and integration across the element/project team and the SSP T&R community. Leads also support the TIWG and PRCB on an as-needed basis.

5.3.10.3 Processes and Tools

The elements/projects are also responsible for providing program metrics to the TIWG. Each element/project has the flexibility to develop and maintain additional metrics, as they deem necessary. SSP elements/projects control boards provide the first level review for disposition recommendations for SSP capabilities that are within the element/project scope of authority. The review and decision-making process are documented in the individual element/project TMPs.

Each element/project defines the top-level capabilities in the SCA and is responsible for providing and maintaining the applicable SCA data. The elements/projects develop and maintain tactical plans that define the detailed steps required to achieve the LND and RD milestones.

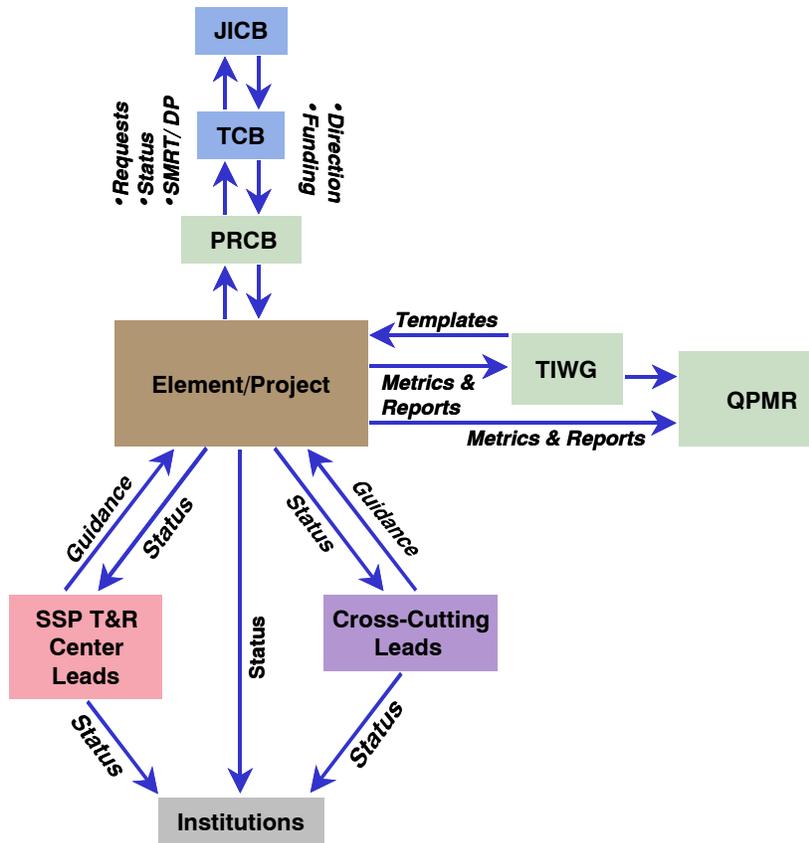
The element/project specific processes and tools are documented in element/project transition implementation plans.

5.3.10.4 Interfaces

The SSP program and elements/projects are represented at the PRCB. The SSP elements/projects observe the products and guidelines developed in T&R plans in order to enable transition processes and reduce total SSP program costs (reference Figure 5-12).

FIGURE 5-12

ELEMENT/PROJECT INTERFACES



5.3.10.5 Metrics

The elements/projects transition leads report actual costs against baselined operating plan for current fiscal year. They provide an explanation for any variance to the plan. The elements/projects provide analysis and measurements of actual deviations from baselined Transition Project Element tactical schedules for specific major SCA Key Decision Date (KDD), LND, and RD-related tasks and milestones. (Reference Appendix E for further metrics details.)

5.3.10.6 Products

The elements/projects are responsible for producing the following detailed planning products, including:

- a. SCA
- b. T&R project plan

- c. T&R metrics inputs
- d. QPMR presentation
- e. Related tasks and milestones

Upon approval to implement disposition, the actual release of capabilities can be performed.

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6.0 SSP - PHASE F

Phase F is the phase of the SSP dedicated to closeout. This phase is expected to be a two-year activity starting from the completion of the last Space Shuttle mission. Each element has a divestment plan that targets completion no later than two years from the start of the closeout phase of the program. All costs beyond the two-year window will be considered threats to the agency and will be coordinated with other affected agency parties through the AA for Human Exploration and Operations.

6.1 DECISION REVIEW AND OVERSIGHT

SSP T&R is an agency-wide activity. Requirements and planning documents provide instructions from the agency on T&R requirements and processes. Program-level requirements are established in NSTS 07700, Volume XX - Book 1.

The SSP PRCB serves as the program-level clearinghouse for decision packages detailing T&R plans. The NASA TCB serves as the agency-level forum providing guidance and oversight on T&R activities. A variety of working groups convene to accomplish goals and integrate efforts across multiple centers, while the TIWG monitors the progress of each program element, project and cross-cutting function.

6.1.1 Cross-Cutting Functions

The program-level cross-cutting coordination is organized around common functions that cross all SSP elements/projects. Each of these cross-cutting functions has defined lead positions that work to ensure the activities are handled in a consistent and coordinated manner. The cross-cutting functions remain Human Capital, Property Management (personal and real), Environmental Management, Historical Preservation/Recordation, Records Management, Communications, Risk Management, Information Technology Systems, Resources, Artifacts, and Export Control.

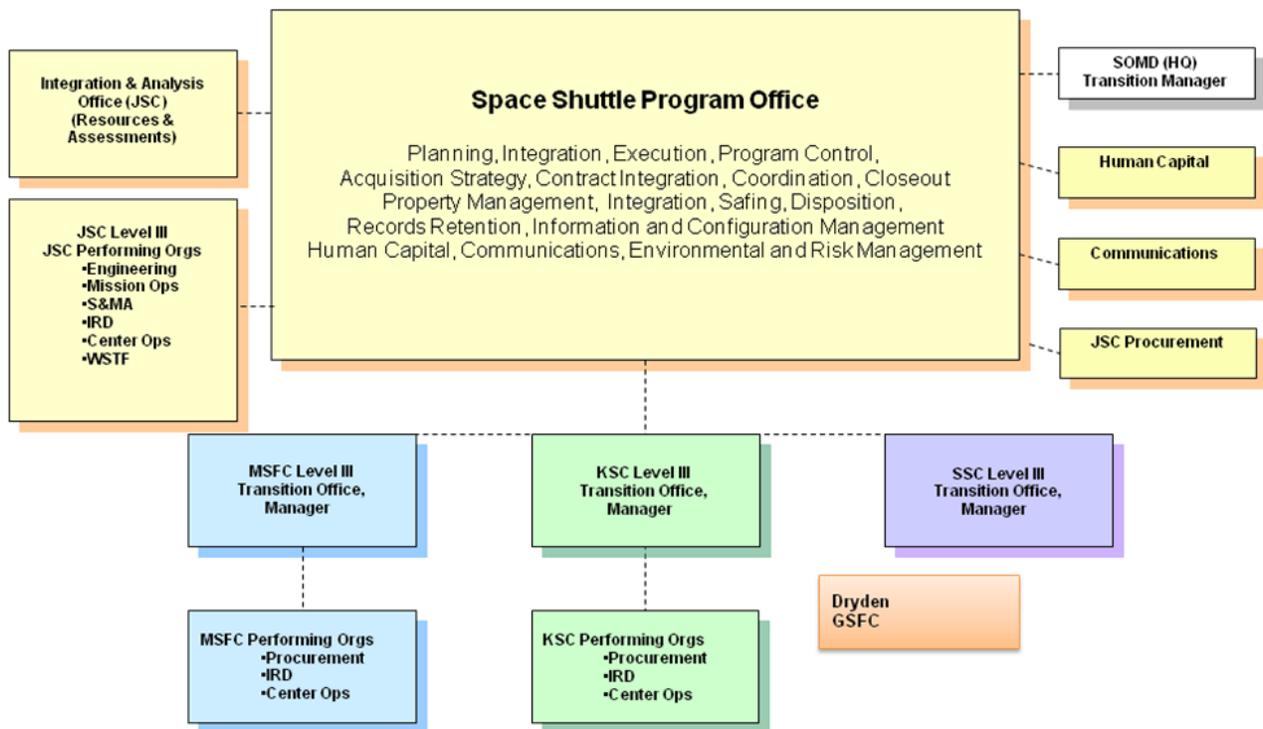
6.2 SPACE SHUTTLE PROGRAM OFFICE (SSPO)

The SSPO will continue to provide leadership and management oversight during Phase F, and will continue to be located at the NASA Johnson Space Center. The SSPO will provide management integration for closeout activities for Level III organizations. Figure 6-1 illustrates the organizational structure. The SSPO will continue to be led by the Space Shuttle Program Manager, who will continue to report to the AA for Human Exploration and Operations. The cross-cutting functions will remain in place, but work has been mapped to a simplified Work Breakdown Structure (WBS). WBS 7.0, T&R Management Integration, occurs at two levels: 1) the program, and 2) the centers. T&R Management Integration is required to issue common guidance and direction, and to integrate the element/project information to the extent necessary for

the SSP Manager to manage the overall T&R effort. The PRCB will remain the clearinghouse for decision packages and the Directorate Program Management Council will be used to further integrate or elevate issues to the agency-level. The SSP has defined a Transition Risk Management process under NSTS 07700, Volume XX - Book 2, Space Shuttle Closeout Requirements, Appendix 19, Program Risk Management Plan Closeout Requirements in order to ensure that the SSPO adequately responds to potential risks associated with program retirement and transition of key assets, facilities, personnel, and technical information.

FIGURE 6-1

SSP TRANSITION AND RETIREMENT ORGANIZATION - PHASE F



APPENDIX A

ACRONYMS AND ABBREVIATIONS

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APPENDIX A
ACRONYMS AND ABBREVIATIONS

AA	Associate Administrator
BMO	Business Management Office
CFR	Code of Federal Regulations
CIO	Chief Information Officer
CR	Change Request
CxP	Constellation Program
DP	Decision Package
DSPL	NASA Disposal System
ED	Engineering Directorate
ESMD	Exploration Systems Mission Directorate
ESS	Executive Strategic Schedule
EST	Environmental Support Team
ET	External Tank
EVA	Extravehicular Activity
FAR	Federal Acquisition Regulations
FCE	Flight Crew Equipment
FCOD	Flight Crew Operations Directorate
FO&I	Flight Operations and Integration
FRC	Federal Records Center
FTE	Full Time Equivalent
GSA	General Services Administration
GSFC	Goddard Space Flight Center
HCL	Human Capital Lead
HCWG	Human Capital Working Group
HPO	Historic Preservation Officers
HPWG	Historic Preservation Working Group
HQ	Headquarters
IPO	Industrial Property Officer
IRD	Information Resources Directorate
ISS	International Space Station

IT	Information Technology
ITAR	International Traffic in Arms Regulations
ITWG	Information Technology Working Group
JICB	Joint Integration Control Board
JPRCB	Joint Programs Requirements Control Board
JTIP	JSC Transition Integration Panel
JTMWG	JSC Transition Management Working Group
KDD	Key Decision Date
KSCTWG	Kennedy Space Center Transition Working Group
L&L	Launch and Landing
LND	Last Need Date
MIPO	Management Integration and Planning Office
MOD	Mission Operations Directorate
MTM	Major Transition Milestones
MTWG	MSFC Transition Working Group
NARA	National Archives and Records Administration
NASM	National Air and Space Museum
NEPA	National Environmental Policy Act
NPDMS	NASA Property Disposal Management System
OHCM	Office of Human Capital Management
OPO	Orbiter Project Office
PAO	Public Affairs Office
PCARSS	Plant Clearance Automated Reutilization Screening System
PDO	Property Disposal Officer
PMC	Program Management Council
PPBE	Planning, Programming, Budgeting, and Execution
PPT	Personal Property Team
PRCB	Program Requirements Control Board
PSE&I	Propulsion Systems Engineering and Integration
QPMR	Quarterly Program Manager's Review
RD	Release Date
RM	Records Manager

RMWG	Records Management Working Group
RPO	Real Property Officer
RSRM	Reusable Solid Rocket Motor
S&MA	Safety and Mission Assurance
SCA	Strategic Capabilities Assessment
SCADB	Strategic Capabilities Assessment Database
SE&I	Systems Engineering and Integration
SIRMA	Shuttle Integrated Risk Management Application
SLS	Space Life Sciences
SMRT	Shuttle Management Resource Transition
SOMD	Space Operations Mission Directorate
SQ&MA	Safety, Quality, and Mission Assurance
SRB	Solid Rocket Booster
SSC	Stennis Space Center
SSME	Space Shuttle Main Engine
SSP	Space Shuttle Program
SSPO	Space Shuttle Program Office
T&R	Transition and Retirement
TBD	To Be Determined
TCB	Transition Control Board
TIWG	Transition Integration Working Group
TMP	Transition Management Plan
TMS	Transition Master Schedule
TPA	Transition Property Assessment
TPR	Top Program Risk
Tri-PRCB	Tri-Program Requirements Control Board
TRIT	Transition and Retirement Information Technology
TRR	Transition Risk Review
U.S.	United States
USC	United States Code
VSE	Vision for Space Exploration
WBS	Work Breakdown Structure
WSTF	White Sands Test Facility

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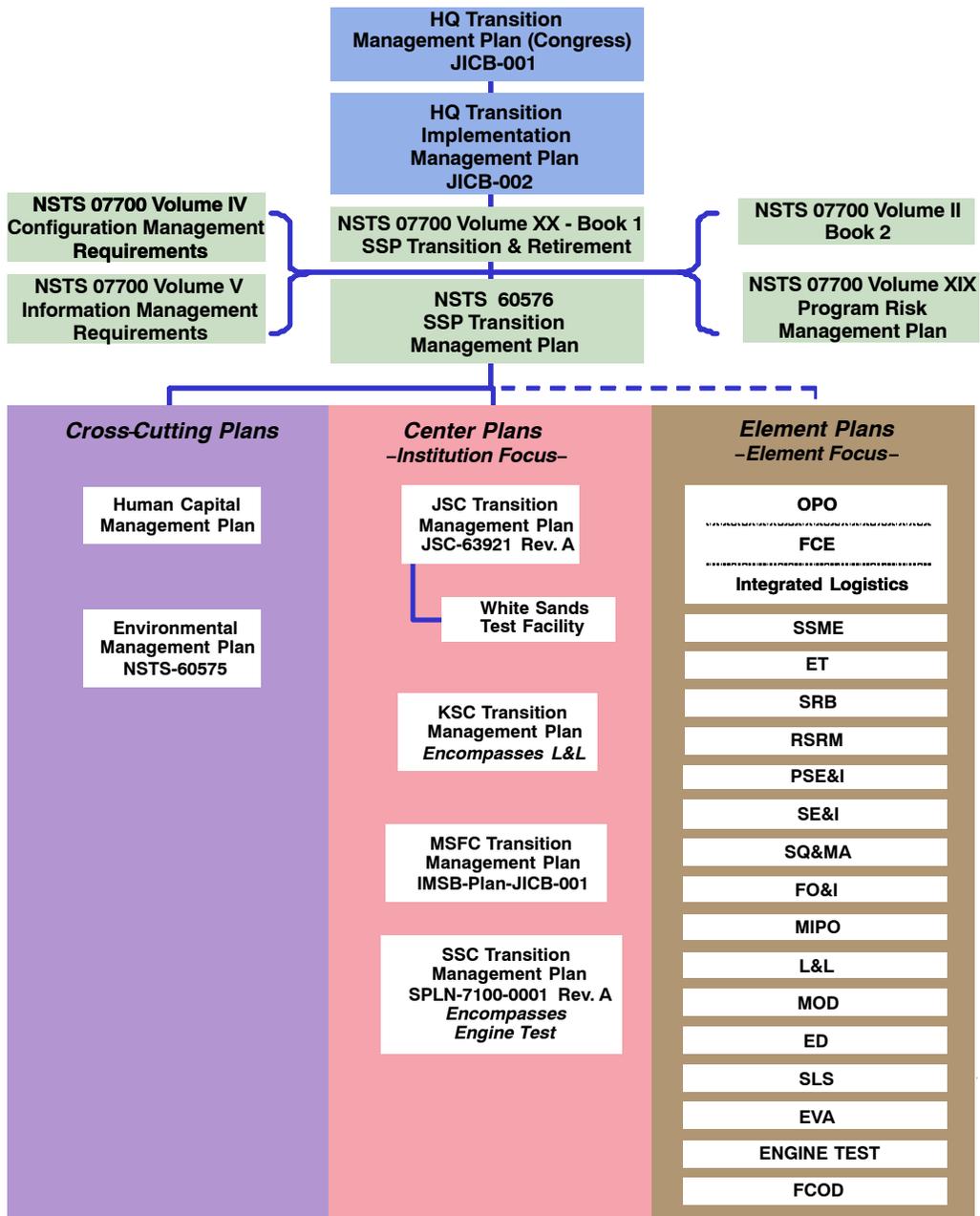
APPENDIX B
DOCUMENT TREE

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APPENDIX B DOCUMENT TREE

The Transition Management Plan and additional transition documents are supporting documents of the NSTS 07700, Volume XX - Book 1.

FIGURE B-1 DOCUMENT TREE



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APPENDIX C
GLOSSARY OF DEFINITIONS

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APPENDIX C

GLOSSARY OF DEFINITIONS

Agency - National Aeronautics and Space Administration.

Asset - Property (real or personal) and human capital with positive value.

Attrition - A reduction in personnel as a result of resignations, separations, and retirement. Attrition can also be applied in logistics to part supply inventories and can result from part failures and end-of-life certification losses.

Capability (vs. asset) - In the context of SSP transition, a capability is the combination of human capital, tangible assets, and intangible assets that, when combined, provide the potential to produce information, goods, or services.

Center (host center) - NASA field installation that holds responsibility for SSP property or personnel during their disposition (either transfer or closeout/disposal).

Contract Closeout - The actions necessary to finalize performance under a contract whether due to contract completion, cancellation, or termination.

Cost - The financial resources already expended for a given entity (e.g., task, hardware).

Cost Estimate - A predictive assessment of the resources (funds, Full Time Equivalents [FTEs]) that will be required to accomplish a task(s), project, or purchase request.

Critical Skill - Any ability that is used effectively, competently, and readily in safe execution or performance of the SSP that could pose risk if dispositioned. Such risks include: cost risk-the cost to reinstate a dispositioned asset (includes procurement, installation, training, etc.), and schedule risk-the schedule delay due to procurement of a dispositioned asset.

Disposal - Orderly elimination of assets according to the established government excess property process (e.g., scrap, sell, or donate).

Elements/Projects - Refers to SSP elements/projects which are established under separate project offices (e.g., Orbiter, SSME, ET, RSRM, SRB, Launch Services).

Environmental Assessment - A study, required by the NEPA, of the change to the natural, physical, and social surroundings caused by a Federal action. The environmental assessment will result in 1) a Finding of No Significant Impact if there are no significant changes or 2) an Environmental Impact Statement if there are significant impacts.

Excess/Residual - An amount beyond what is required or sufficient; the amount remaining at the end of a process.

Human Capital - People and their capabilities, expertise, skills, knowledge, education, training, experience, health, and motivation that form their ability to be economically productive and to provide customer solutions.

Incentive - Reward for accomplishing a defined task. During SSP mission execution, retention bonuses may be used as incentives to minimize attrition.

Institutional/Non-Institutional - Part of a defined organization/not part of a defined organization.

Inventory - Quantity of goods, materials, skills, etc., on hand.

Last Need Date - The last time a specific item, process, tooling, etc., is required to complete a required task.

Mission Execution - The ground and flight activities that are required to safely fly the Space Shuttle through the last flight. This includes additional programmatic activities to cope with risk inherent in program termination, such as incentive programs, employment transition support, heightened communication, and increased quality assurance surveillance. Mission execution also includes a strategic assessment process to determine, in detail, when SSP capabilities are no longer needed to fulfill mission requirements.

Mothball - To deactivate from use or service and keep in reserve by putting preservative technical measures in place to maintain the asset's health and future availability.

Personal Property - Property that is not real property.

Real Property - Land; rights for the land, ground improvements, utility distribution systems, buildings, and other structures. Real property does not include foundations and other work necessary for installing special tooling, special test equipment, or plant equipment.

Release Date - The date after which all tasks necessary to prepare the property for release such as hardware safing, preparation for transportation, artifacts assessment, precious metal extraction assessments, environmental clean-up are completed, and the property is ready to be released to the plant clearance officers or center property disposal officers.

Retirement - A form of transition, but for which there is no reuse within NASA. Retired capabilities will be either preserved due to historical significance, donated, sold, or scrapped/demolished. This includes the termination process for contracts, subcontracts, or other supply mechanisms and the disposition of SSP assets (real and personal property and human capital).

Risk - The combination of 1) the probability (qualitative or quantitative) that a program or project will experience an undesired event such as a cost overrun, schedule slip-page, safety mishap, compromise of security, or failure to achieve a needed technological breakthrough; and 2) the consequences, impact or severity of the undesired event were it to occur.

Safe/Safing - A process that is implemented in which the primary purpose is to prevent an unintended functioning of an explosive charge or release of a hazardous substance.

Shared Asset - Any property of value funded by the SSP that also is co-habitated and/or funded by other NASA or government programs.

Strategic Capabilities Assessment - An SSP program-wide activity to review all SSP assets and human capital to determine their LND to safely support the SSP flight schedule.

Transfer - The act of moving an SSP asset physically to a new location as part of its disposition. Its disposition can be disposal via the federal excess property process, delivery to a different program, or handover to a host center for storage/mothballing. Transfer can also be a static process of changing financial and operational responsibility from SSP to another organization without any physical movement.

Transition - The process of planning and implementing tasks required to transfer SSP capabilities, in whole or in part, to another program or the institution.

Transition Management - Provides direction for priority activities to ensure effective management of elements/projects during the SSP transition; oversees and directs the transition processes, actions, and timetable.

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APPENDIX D

TPA AND PROPERTY DISPOSITION PROCESS

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APPENDIX D

TPA AND PROPERTY DISPOSITION PROCESS

1.0 TPA INTRODUCTION

TPA is an upfront, proactive process undertaken by the SSP elements/projects to categorize, assess, and review government personal property. This process prepares for the high volume of property that will be dispositioned at the end of the program. The SSP elements/projects must be flexible as the TPA data requirements may vary slightly depending on center requirements where the property is located.

2.0 TPA PHASING

The SSP TPA process in support of T&R will be initiated as early as possible, and in phases, for a variety of reasons:

- a. Reduces the information gathering burden at the end of the program which will minimize errors and omissions
- b. Provides a planning tool for budget and schedule optimization and execution for multiple organizations (program, elements/projects, centers, and Property Disposal Officers [PDOs])
- c. Provides the foundation of program metrics development and reporting
- d. Maximizes the use of current subject matter experts prior to last flight while minimizing workload impacts

3.0 TPA REQUIREMENTS

The process initially identifies the availability date and determines the potential for transfer of the property to another NASA program. The TPA requirements for property being transferred are less stringent than for property being disposed by some other method. If the property is not identified for transfer, additional information is collected and documented prior to releasing the property as excess. The TPA process utilizes a specific coding scheme when possible, ensuring consistency across the program regardless of the asset's location. These codes are identified in Tables D.1 and D.2. Existing property systems can be utilized to provide this information as well.

3.1 PHASE 1

The information required for property disposition/disposal is captured utilizing a two-phase approach. Phase 1 includes the data that is necessary for planning purposes

and is collected as soon as practical (reference Table D.1). Some of the information identified in Phase 1 may be undeterminable at the time of the initial assessment, and will then be completed during Phase 2 of the process.

TABLE D.1
PHASE 1 TPA DATA ELEMENTS

<u>Data Element</u>	<u>Code/Remarks</u>
Property Description	Nomenclature, Part Number, etc. - per FAR Part 45
Predisposition Code	T: Transfer (Identify the recipient) E: Excess S: Scrap B: Bulk
Property Category	AP: Agency Peculiar - Government-owned personal property that is peculiar to the mission of one agency (e.g., military or space property); excludes material, special test equipment, special tooling, and facilities. (FAR 45) FL: Flight Material (identified in records). GR: Ground Material - Property that may be incorporated into or attached to a deliverable end item or that may be consumed or expended in performing a contract. It includes assemblies, components, parts, raw and processed materials, and small tools and supplies that may be consumed in normal use in performing a contract. (FAR 45) PE: Plant Equipment - Personal property of a capital nature (including equipment, machine tools, test equipment, furniture, vehicles, and accessory and auxiliary items) for use in manufacturing supplies, in performing services, or for any administrative or general plant purpose. (FAR 45) ST: Special Tooling - Jigs, dies, fixtures, molds, patterns, taps, gauges, other equipment and manufacturing aids, and all components of these items that are used in the development or production of particular supplies or parts or the performance of particular services. (FAR 45) TE: Special Test Equipment - Single or multi-purpose integrated test units engineered, designed, fabricated, or modified to accomplish special purpose testing in performing a contract. (FAR 45) TM: Test Material - Similar in definition of "material" as in Ground Material above. In this case, it is material consumed in preparing for and conducting program tests. (FAR 45) TR: Training Material - Similar in definition of "material" as in Ground Material above. In this case, it is material used during ground based or underwater crew training.

TABLE D.1

PHASE 1 TPA DATA ELEMENTS - Concluded

<u>Data Element</u>	<u>Code/Remarks</u>
Item Status	<p>A: Active - Active items include all current configuration or “Engineering Active” hardware and all equipment needed to support a capability required for Mission Execution.</p> <p>O: Obsolete Items - Obsolete items include hardware that has documentation/board approval or that has been replaced by newer technology.</p> <p>N: Not Implemented - Property that was never operationally used.</p> <p>R: Released Capability - Property that is no longer needed to support mission execution.</p> <p>D: Degraded - Tooling or equipment has degraded to a point that it is unusable.</p>
Availability Date	Defines, at a minimum, the projected fiscal year the property is no longer required for SSP program use and can be released.
Disposition Constraints	<p>H: Contains hazardous materials.</p> <p>M: Contains precious metals.</p> <p>Artifact designation:</p> <p>W: Identified as an artifact based on the artifact “wish list” criteria provided by NASA HQ.</p> <p>C: Identified as a potential artifact based on the artifact “wish list” criteria provided by the NASA Center.</p> <p>P: Identified as a potential artifact based on element/project specific criteria utilizing in-house expertise and/or existing processes and procedures, if applicable. (Project specific criteria should be partnered with NASA HQ.)</p> <p>E: Subject to export control regulations - SSP elements/projects will work with the Center Export Administrators to code property according to the export control regulations.</p> <p>O: Oversized item that requires special handling to be removed, is too large to fit on a flat bed truck, or weighs over 15,000 pounds (per KSC handling constraints).</p>

3.2 PHASE 2

Phase 2 effort includes obtaining the remaining data and information that is based on criteria that will not change over time, but must be provided to the PDO as part of the disposition process (see Table D.2). All TPA activities should be completed prior to the final flight. The SSP elements/projects are responsible for scheduling the TPA process tasks and activities to ensure that the data is collected in the most cost effective and expeditious manner possible, this includes completing both TPA phases in parallel if deemed appropriate.

TABLE D.2

PHASE 2 TPA DATA ELEMENTS

<u>Data Element</u>	<u>Code/Remarks</u>
Identify all hazardous materials	Type based on the Federal Register Notice, May 7th, 2007 (Volume 72 Number 87) Pages 25723 - 25735 list of hazards.
Identify all recoverable precious metals by type:	G: Gold S: Silver P: Platinum group metals (platinum, palladium, rhodium, iridium, ruthenium and osmium) M: Mixed or combination of precious metals
Historical artifact justification	Include usage history.
Final destination, if known	1: Constellation 2: ISS 3: Other NASA 4: School 5: Museum 6: Other Federal/State

Due to the number of property line items, a bulk coding approach is recommended in order to efficiently record and track the TPA data. Bulk coding is possible when the property can be grouped such that the same TPA data can be assigned.

3.3 ADDITIONAL DATA ELEMENTS

At the time of disposition, only a few additional data elements, which are required per FAR Part 45 as part of the normal property disposition processes, are needed. Table D.3 details the additional data elements required.

TABLE D.3

ADDITIONAL DATA ELEMENTS

Data Element	Code/Remarks
Property Location	Center or facility, building, room
Unit Acquisition Cost	
Year of Manufacture	Required for equipment only
Property Condition	Unused Used/Serviceable Repairs needed Salvageable Scrap

4.0 TPA REPORTING

Elements/Projects coordinate with their center IPO or PDO to distribute results of the TPA and provide itemized listings of property. The data submitted and reports frequency is coordinated with each center's IPO or PDO. Interim listings may be required by the IPO/PDO representative, however; within 30 days of completion of TPA activities the results and itemized listings are submitted to the center's IPO and PDO.

The TPA process, though laborious, is essential to ensure the cost-effective, phased disposition of all assets when the property is in excess of program requirements.

The personal property enters the disposition process with a directive instructing the host center to implement disposition.

FIGURE D-1

PERSONAL PROPERTY DISPOSITION PROCESS

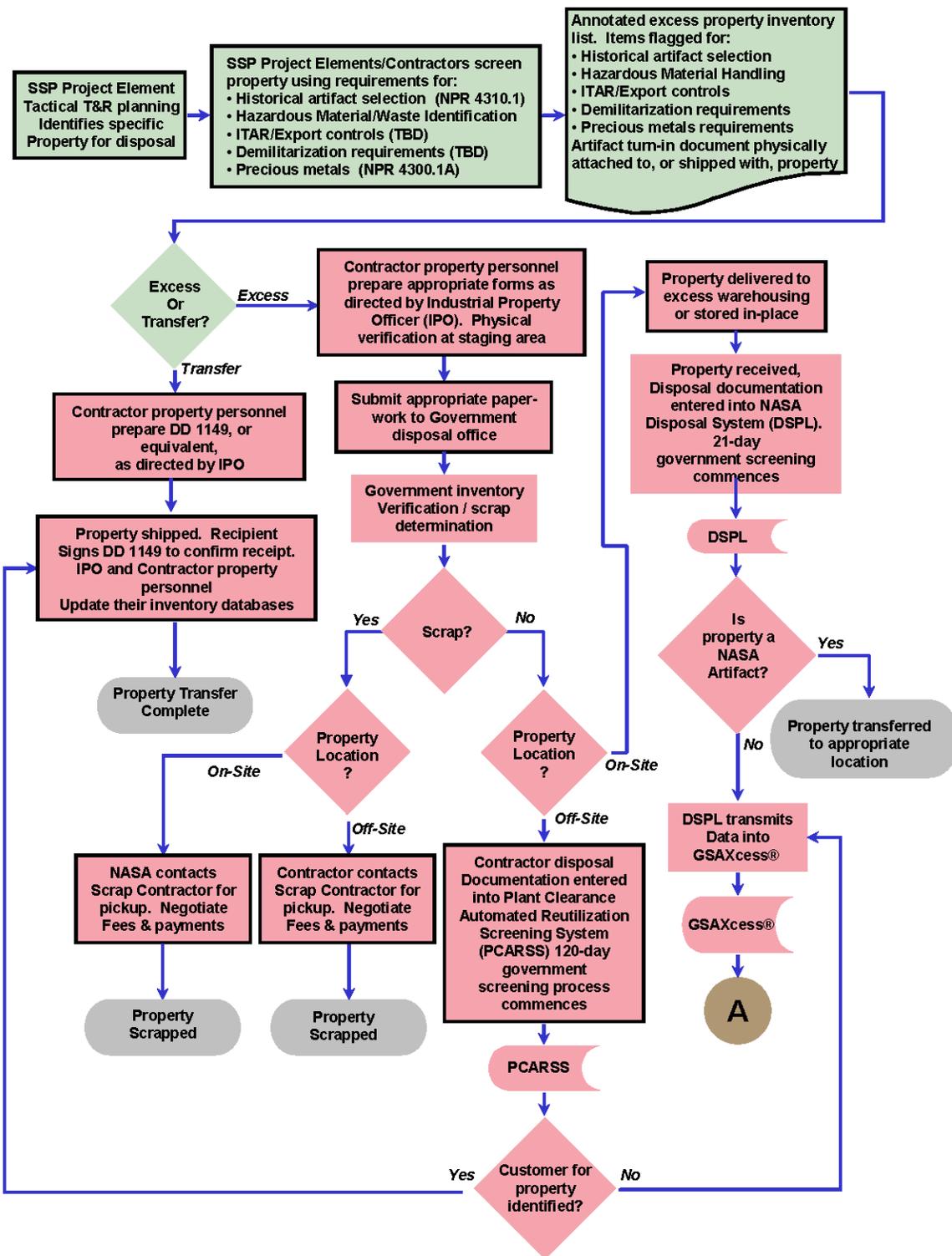
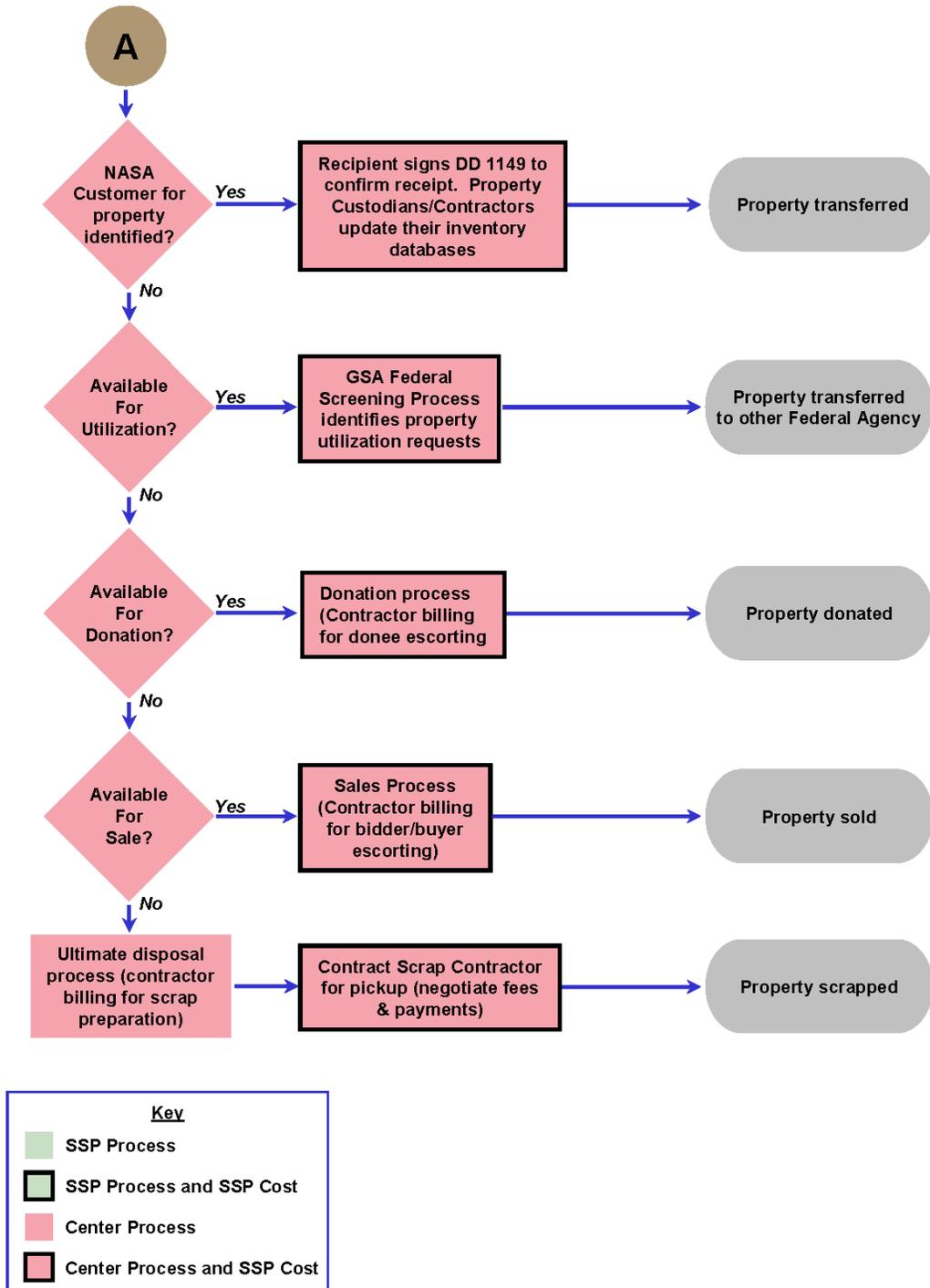


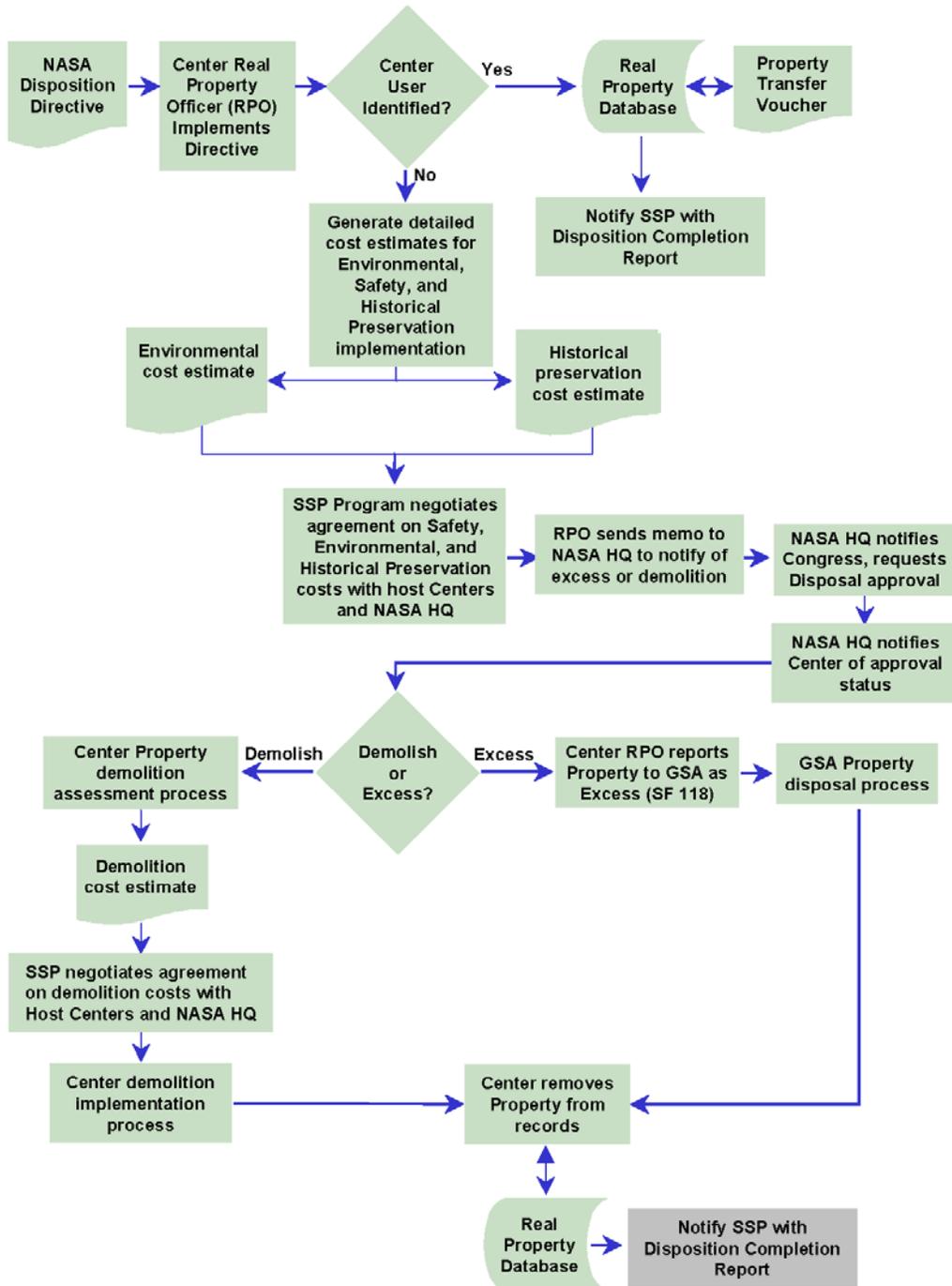
FIGURE D-1

PERSONAL PROPERTY DISPOSITION PROCESS - Concluded



The real property enters the disposition process with a directive instructing the host center to implement disposition.

**FIGURE D-2
REAL PROPERTY DISPOSITION PROCESS**



APPENDIX E

METRICS

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FIGURE E-1 METRICS

	Title	Description	Reporting Frequency	Data Tools
Cost	Spend plan variances	Report actual costs against baselined operating plan for current fiscal year. Provide explanation for variance to plan.	Monthly	Excel Spreadsheet; Powerpoint
	Cost Trends	Graphic summary depiction of SSP budget performance with comparative data	Monthly	Excel Spreadsheet; Powerpoint
	Budget Status	Current funds available, liens and threats summary.	Monthly	Excel Spreadsheet; Powerpoint
Schedule	MTM	Dates for specific Major Transition Milestones tracked for Program, ET, RSRM, SSME and KSC	Monthly	PowerPoint, Excel
	TMS Variances	Deviations from baseline TMS schedule for major milestones, including: Strategic KDDs, LNDs, and RDs	Monthly	MS Project, Excel, PowerPoint
	SCA/TMS Completion Actuals	Completion of major milestones (SCA dates)	Monthly	PowerPoint, Excel
	SCA/TMS Lookaheads	Upcoming SCA milestones for the current month and month ahead)	Monthly	PowerPoint, Excel
	ESS (LND and RD)	An executive strategic schedule for LNDs and RDs	Monthly	MS Project, Excel, PowerPoint
	Action and Decision Tracking	Action completions and open work	Monthly	Sharepoint action tracking list; Excel
Technical	Transition Activities--cs	Shows number charging full time to Shuttle, Station and Constellation. Also shows number charging to multiple programs	Monthly	Excel and Powerpoint charts
	Retention Performance: Civil Service	Planned versus actual FTE rates by Center for civil servant	Monthly	Excel and Powerpoint charts
	Retention Performance: Contractor	Planned versus actual FTE rates by Company	Monthly	Excel and Powerpoint charts
	Attrition Rates: Contractor	Plan versus actual attrition rates by company (may want to look at by location and skill)	Monthly	Excel and Powerpoint charts
	Communications Metrics: Surveys/ Feedback	Effectiveness of Communications Planning and Tools through survey/feedback analysis	As needed	Excel spreadsheet
	Communications Metrics: Website Statistics and Monthly Reports	Effectiveness of Communications media through website/Sharepoint usage statistics	Monthly	Sharepoint usage statistics
	Personal Property Divestment Metrics	Proposed Metric to show insight into what has been done	Quarterly	Placeholder Metric
	Personal Property Divestment Plan	PPBE estimate of number of line items to be divested in next fiscal year by element/contract based on projected actuals from Transition Project Element plans, SCA data, and trending from previous quarters	Annually	Excel spreadsheet
	TPA Metrics	Various metrics summarizing inputs and comparisons with other property divestment planning	As requested	Excel and Powerpoint charts
	Real Property Actuals	Listing of SSP and SSP T&R Real Property at the Human Spaceflight Centers	As requested	Excel Listing
	SSP Property Recordation Status	Matrix of Red-Yellow-Green status based on progress made on Recordation activities schedule milestones and whether there is potential impact to release of SSP Facilities currently funded and undergoing recordation.	Monthly	Excel spreadsheet; MS Project Gantt chart
	SMRT Document Actuals	Histogram analysis/actuals of Number of SMRT Docs processed, projection of future numbers (including probable TPRCB board presentation schedule mapping), List of SMRTs and their associated project elements and centers	Quarterly	Excel spreadsheet
	Environmental Metrics	1. Environmental Risk Identification, SMRT Doc and/or Level II and Level III Risk Identification; 2. Environmental Risk Mitigation Percent Complete, SMRT Doc Issue Progress and/or Level II and Level III Risk Mitigation; 3. Environmental Risk Closeout Document, SMRT Doc Issue Complete and/or Level II and Level III Risk Mitigation Completion	Quarterly	Excel Spreadsheet; Powerpoint charts
	Information Technology Metrics	Measure of the progress of dispositioning the SSP IT assets. Various metrics summarizing and quantifying SSP IT assets.	Monthly	Excel and Powerpoint charts
Records Metric	Number of boxes of records archived (planned vs actuals)	Quarterly	Excel spreadsheet	
Risk	Risk Reports	Analysis of current risks by organization (SSP Business Management and Management Integration and Planning)	Bimonthly-TRR	PowerPoint; Excel

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APPENDIX F
SCA AND SCA DATABASE

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APPENDIX F

SCA AND SCA DATABASE

1.0 PROCESS/TOOLS

An SSP SCA tool is required to efficiently and effectively manage the T&R of capabilities. The SCADB provides such a tool. The SCADB is accessible from the Space Shuttle Transition and Retirement website located at the SSP Main website.

The SCADB is used for tracking, controlling, maintaining and updating information associated with SSP capabilities. In addition to the SCADB, a separate in-house-designed measurement and health status tool is used for data analysis within SCA, providing metrics concerning SCA, and facilitating metrics packages. The tool is necessary to provide rigorous analysis without impeding performance and availability of the database.

2.0 ANALYSIS

Two types of analysis are performed concerning the SCADB. The first analysis, a Block completion, is performed by an external tool that determines whether or not all of the required fields have an input, and then reports it as a percentage of the fields that are available to complete. A qualitative report is presented to the TIWG with the goal of having all elements/projects report 100% of all required fields completed. The analysis tool does not distinguish whether or not the data in an individual field is valid.

The second type of analysis is performed in phases on the data itself. The first phase determines the validity of the inputs. It determines whether there is any duplicate data, any TBDs, or any other data placeholders. The second phase of data analysis determines the quality, and consistency of inputs between elements/projects and the data requested. Finally, the third phase uses the data collected to provide metrics, information for the capability disposition process, schedules, analysis of capabilities across project elements, and to support meetings and action items. Although there are three phases for performing SCA data analysis, the phases are not serial. They may be and are performed concurrently.

3.0 DATA CAPTURE

The capability data housed in the SCADB and necessary for the divestment process is captured in phases or blocks of datasets that are report-driven. The resulting aggregate reports and metrics are presented at the QPMR.

4.0 BLOCK I

The first block contains general but distinguishing identifier information, schedule information and rationales. It provides the following utility:

- a. The capability to communicate the overall T&R effort to SSP and HQ management for strategic decision-making; e.g., when management decisions are needed for transition/retirement of capabilities and upcoming capability LNDs and RDs
- b. The capability for SSP T&R Center Leads and cross-cutting leads to analyze the overall T&R effort to make recommendations to management for strategic decision-making
- c. The capability for element/project transition leads to communicate their overall T&R plans

5.0 BLOCK II

The second block captures additional capability identifier information, associates risk factors to phasing out a capability, program interfaces, and provides contractor and supplier information. It provides the following utility:

- a. Shows when contractors phase-out or transition from a capability
- b. Provides insight into impacts to states or congressional districts
- c. Shows dependencies (impacts/synergies) between existing SSP capabilities and ISS Program, CxP, or other programs
- d. Provides information to better manage risks associated with capability, and the impacts/synergies the capability has on other programs, centers, or agency

APPENDIX G
SMRT DOCUMENT

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Pre-decisional

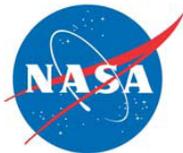
Space Shuttle Management Resource Transition Document (SMRT)

Resource number X (Resource title)

Element Name, NASA Center

Date

Template



National Aeronautics and
Space Administration

Pre-decisional

Space Shuttle Program (SSP) Transition Principles

The Vision for Space Exploration set in motion the retirement of the SSP by the end of FY 2010 and began SSP transition. The transitioning of SSP assets will be undertaken in a manner so as to safeguard the long term viability of the Nation's technical capabilities and assets for future opportunities and challenges. As such, the objectives of SSP transition are to preserve human capital / critical skills, infrastructure, and support equipment for the potential utilization by future programs, both internally and externally to NASA, and to responsibly disposition (phase-out) those SSP assets that are deemed no longer of value toward meeting NASA's Exploration objectives. All objectives will be accomplished in a manner that does not interfere with safely completing the remaining Space Shuttle manifest and will be fully integrated towards the achievement of the Vision for Space Exploration. This integration will include working closely with the Constellation Program to convey lessons learned and to facilitate the leveraging of existing and future resources.

SMRT Document Scope

The mechanics of transitioning the SSP will be complex, difficult, and filled with many unknowns. Therefore, a business case platform will be utilized. This will ensure that creditable, consistent, and accurate information describing the characteristics of a transition-ready resource or capability are annotated and communicated in a standardized format. The Space Shuttle Management Resource Transition (SMRT) document will be the vehicle for this transmission. The document will provide a body of relevant information from which decisions can be rendered, communicated, documented, and tracked. In addition, the SMRT document can be called upon in the future as supporting rationale for the decisions made to either transfer or phase-out a specific SSP capability.

It should be noted that this template has been designed to encompass a broad range of potential scenarios; as such some of the requested information may not be needed to describe the specific characteristics of the capability considered for transition. The following template is a guide and therefore tailoring is welcomed and expected as we refine and evolve the application of this business case medium.

SMRT Document Instructions

All SMRT documents will include the *Executive Summary* as a minimum set of information. The *Executive Summary* is sufficient to meet the SMRT requirement for tracking and archiving transition activities performed within the authority of the element projects. The *Executive Summary* allows SSP projects to document closeout or transfer decisions that do not carry significant risks as identified by the guiding questions below. If the potential risks to future Agency programs are apparent or even possible, a full SMRT may be justified to ensure sufficient information is available in the review process.

Pre-decisional

SMRT Requirement

A SMRT document will be required if any of the following conditions are met:

- An SSP capability, as established in the Strategic Capabilities Assessment Database, is being partially or fully terminated before the last Shuttle flight is complete through post-landing safing (this includes capabilities being directly transferred to Cx).
- An SSP capability transfer or termination is pending, but requires PRCB or TCB authorization to establish priorities, provide gap funding, or address other issues.
- Any significant SSP resource, asset or capability that is being dispositioned (transferred, closed-out, excessed, etc) and meets any of the criteria listed in the Criteria Guidelines section below.
- A SMRT document is NOT required for every transition action. Examples of actions not requiring a SMRT document at all include the following:
 - Common purchase order completion. The SSP has thousands of vendors supplying non-unique equipment/material via purchase orders. If supplies are sufficient such that no further POs are required, there is no substantial government equipment to disposition, and there is no significant impact to other programs or the viability of the supply chain, then a SMRT is not needed. [The element transition managers have vendor lists. They can track the status of the element vendors and report when relationships are complete. Only those of significant stature or with potentially significant implications need to be documented via a SMRT.]
 - SSP excess hardware or material transfer. While transferring a whole product line might be a SMRT candidate, transferring excess hardware is not.

If a SMRT is necessary, per the *SMRT Requirement* above, then the author shall determine whether an *Executive Summary* is sufficient. The following criteria questions can be used as a general guideline to help determine whether the *Supporting Documentation* section of the SMRT needs to be completed in support of the decision-making process. Because of the subjective nature of some of the responses to the criteria guidelines, the option always exists to complete the full SMRT.

Criteria Guidelines

- A “yes” response to any of the questions may require additional analyses and a full SMRT to be completed.
- A “no” response to all of the questions requires only the executive summary to be completed.
- The term “significant” is purposely used to provide some flexibility to the elements/centers in identifying the resources or capabilities that require higher-level review. Implementation relies on the reasonable judgment of the element transition managers and center leads.

Pre-decisional

- Y / N If another program or SSP element currently uses this capability (e.g. facility, vendor, or workforce), is there a potentially significant impact to those entities because of this capability closeout?
- Y / N If another program or SSP element needs this capability (e.g. facility, vendor, or workforce) in the future, will there be a gap or overlap that requires resolution?
- Y / N If this is a unique national capability, is the viability of the capability at risk?
- Y / N If this is a critical, sole-source supplier to SSP or potentially critical to ISS or CxP, is the viability of the vendor at risk?
- Y / N Will a significant facility be shut down?
- Y / N Are there environmental activities associated with transfer or shut down of the capability/vendor that require action beyond standard environmental practices and that could result in a Government liability concern or issue?
- Y / N Are there any potential historic preservation impacts to shut down or transfer the capability/vendor?
- Y / N Are there potentially significant impacts to contractor or civil servant personnel?

SMRT Submission Process

A process has been established within the Agency, SOMD and the SSP to accommodate the transition and retirement of the Shuttle Program. The engine within that process resides within the SSP Projects, Elements and support organizations. In accordance with this approach, transition SMRT documents will primarily be developed by the level III organization that is dispositioning the resource, asset or capability. It is their responsibility to assess the significance of the action, determine the need for a SMRT, collect the data and populate the SMRT, and submit the SMRT through the process with sufficient lead time to appropriately respond to any TCB actions/decisions and still meet the planned release date.

Completed SMRT documents will be reviewed with the designated center lead (MSFC, KSC, JSC, SSC) for concurrence and submitted to the PRCB as an SR. (If required, a funding CR should be submitted to the appropriate forum after the final PRCB/TCB decision is made.) The PRCB Chair will either adjudicate the item or approve it for presentation to the TCB, as appropriate. Once a decision is reached at the appropriate board, the SMRT document will be converted to read-only and preserved in an SSP electronic repository.

Pre-decisional

Table of Contents

Executive Summary

- 1.1 Resource Overview
- 1.2 Contract Resource Physical Location
- 1.3 Disposition Summary
- 1.4 Program Element Authority

Supporting Documentation

- 2.0 Resource Description
 - 3.0 Government Workforce Considerations
 - 4.0 Contractor Data
 - 4.1 Companies involved
 - 5.0 Cost Data
 - 5.1 Annual cost to operate
 - 5.2 Cost to close-down
 - 5.3 Cost to sustain
 - 5.4 Cost to repair to Agency standard
 - 6.0 Environmental Information
 - 7.0 Historical Information
 - 8.0 Time / Schedule Considerations
 - 9.0 Associated Risks
 - 10.0 Options
- Appendices (if available and used to support information contained within)

Pre-decisional

Executive Summary

This *executive summary* provides a complete description of the SSP capability in question and its planned disposition. It provides sufficient summary information as a stand-alone record for those resources that require SMRT documentation. The *supporting documentation* section will only be included if determined necessary per the criteria guidelines.

1.1 Resource Overview

Provide a brief description of the resource (capability / vendor / process / etc. – resources may be grouped), its location and associated contractor and state the date and reason why it is no longer needed by the program. State if resource is unique and why. If resource is shared, identify all Government users and percentage of use. State, based on historical attrition and/or failure rates, what the current SSP or ISS inventory will support (i.e XX missions). Also state all stakeholders potentially impacted.

1.2 Contract Resource Physical Location

If resource is provided by Contract, provide the Contractor business name, and list the street address, state, city and zip code where resource/capability is manufactured / assembled / processed.

1.3 Disposition Summary

In this section provide a roll up of the package including recommendations/planned actions. Provide an explicit Last Need Date. Describe the pros and cons and potential impacts to terminating the need of the resource/capability in the future. Restate the workforce, environmental and historical preservation impacts and planned remediation (transfer). State ITAR issues (if applicable) and the impact to National capability (if applicable).

1.4 Project Element Authority

Orbiter, ET, RSRB (RSRM/SRB), SSME, MOD, FCOD, Launch and Landing, etc. Include NASA center, project manager's name, document preparer's name and contact information.

Pre-decisional

Supporting Documentation

2.0 Resource Description

Describe the general capability/process/function of the resource including the equipment used (GFE or contractor supplied personal property). Provide a list of stakeholders or customers for the resource. Provide a planned last need date and supporting rationale.

List the real property utilized including number of buildings, size, condition and Facility Condition Index number (if available), etc. Provide original and replacement cost information. Summarize the personal property impacts of transitioning this capability. Summarize any records retention/archiving impacts of transitioning this capability.

If it is a vendor, is it unique or sole source. What percentage of vendor business is attributed to NASA and if the site contain NASA property.

Include photographs.

3.0 Government Workforce Considerations

Demographics and Skills—capture all of the civil servants (direct and matrix) required to design, manufacture, fabricate, procure, manage, operate, maintain, and repair the resource. What are the outplacement plans for the affected civil servants? What are the estimated costs?

For any planned duty station changes, provide the new duty station and the number of employees targeted to move.

Identify any remaining workforce concerns—such as skills retention for problem resolution.

Grade	9 and below	11 to 13	14/15	SES
Direct				
Matrixed				

Duty Station			
Direct			
Matrixed			

Pre-decisional

Skills (Levels of Certification)	Direct	Matrixed	Unique skill? (not available elsewhere in the Agency)

4.0 Contractor Data

List all contractor companies associated with the resource. Provide information in Government Fiscal Year (GFY) format. For example:

Provide details on the number of employees that are potentially impacted and the expected/planned consequences to them (retirements, attrition, transfers, layoffs, etc.). Include the skill mix and types and levels of certification.

Provide information about the location of the activity.

Provide contract information. Contract information would include, but not limited to the type, duration, identifier number, etc. It would also include any contract factors (termination costs) that might be of significant impact.

Provide a list of GFE/contractor real or personal property including potential disposition impacts (who is responsible).

Provide additional information if this is the only source known to the government to provide this resource. Provide percentage of total business that the Program provides to support this activity.

List sub-supplier companies associated with the resource.

5.0 Cost Data

5.1 Annual Cost to Operate

Provide the annual cost to operate the resource with run-out costs through end of program (excel spread sheet). Break down the cost for each category (facility, personnel, overhead, materials, maintenance, environmental, etc.). Identify if the run-out costs are in the current element budget. Clearly identify the GFY monthly cost associated with continually maintaining the resource beyond element last funding availability date. Identify outstanding maintenance and maintenance backlogs with supporting schedule, cost and implementation. Provide all costs, work force, duration, etc. in Government Fiscal Year (GFY) and EP's.

Pre-decisional

5.2 Cost to Close Down

Provide estimated total cost to close down resource completely (include details of associated costs – what would it take. This would also include potential areas to mitigate close down costs...scrap value, property sale, etc). Also provide estimated cost to re-establish resource if closed out completely (include details of associated costs to bring it back to full capability and estimated life cycle costs of the resource). Provide a planned general method/schedule to conduct stated activities.

5.3 Cost to Sustain

Provide estimated costs to maintain resource at short term (1 year) / medium term (3 year) / long term (5+ years) sustainment levels (include details of associated costs). Provide estimated cost to re-establish resource from said sustainment terms (include details of associated costs to bring it back to full capability and life cycle cost estimates). Provide a general method to conduct stated activities.

5.4 Cost to Repair to Agency Standard

(If applicable) If resource is in need of repair, provide estimated cost and schedule to bring it back to stated condition. For example, provide Facility Condition Index, BMAR data, etc.

6.0 Environmental information

Provide a description of the environmental status and concerns. Reference relevant federal, state, and local regulations / standards that are driving the concerns. Describe the potential environmental risk to the Government associated with the proposed action(s). Address the environmental risk categories such as National Environmental Policy Act (NEPA) requirements, environmental obligations (leases, MOUs, agreements, etc), environmental compliance and permit issues (modifications/closures, notices, gap funding, etc.), regulatory exemptions, environmental records retention, environmental contamination, and property transfer and disposal requirements (real property, personal property, special artifacts, special material stockpiles, etc.) Also provide a timetable and expected cost for any ongoing actions or known future actions.

7.0 Historical information

If resource has a potential historical impact for preservation, state rationale for classification. Provide details on potential recipients. Also provide risks and assumptions with transfer of resource (cost, schedule etc). Include relevant details defining compliance with the National Historical Preservation Act (NHPA) and their consequences to the existing and future Programs (if any). Provide / reference historical documentation/surveys if available.

Pre-decisional

8.0 Time and schedule

Restate the date at which the resource is no longer needed. State required time to disposition (level, abandon, mothball, etc) and provide planned schedule for disposition. Provide timeline if available.

9.0 Associated Risks

Provide a detailed assessment on the associated risks with respect to SSP mission requirements and resource disposal. Address risk in the following areas: cost, schedule, technical, environmental and safety, that the program may incur with the decision to terminate the resource. This would include the potential impacts to associated stakeholders. Provide a justification and mitigation plan if resource is needed in the future (i.e. if the need arises, how the program would address it). State what margins the program has toward supporting manifest extension. Provide all costs, manpower, duration, etc in GFY & EP and safety risks in a SSP risk matrix (likelihood vs consequences).

10.0 Options

List potential options associated with resource or capability. This section would provide a roll up of the data presented in the Cost Data section and are not limited to the examples below. The number of options could vary depending on the resource under transition consideration.

Option 1: This option would state the current SSP (close-down) planning activities. (i.e no other potential use outside of SSP). List planned time to accomplish and associated costs to implement.

Option 2: This option would state the costs associated with placing the resource in a short term (1 year) / medium term (3 year) / long term (5+ years) mothball type mode (i.e. zero production level). List the details needed to accomplish including cost and schedule. Also include the time and cost needed to re-establish the resource to full capability.

Option 3: This option would state the cost associated with placing the resource in a sustainment or scaled down production mode (i.e. keeping the capability viable for future use by SSP or others outside of SSP). State the production level. List the details needed to accomplish including cost and schedule. Also include the time and cost needed to re-establish the resource to full capability.

APPENDIX H
RECORDS ARCHIVAL PROCESS

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**FIGURE H-1
RECORDS ARCHIVAL PROCESS**

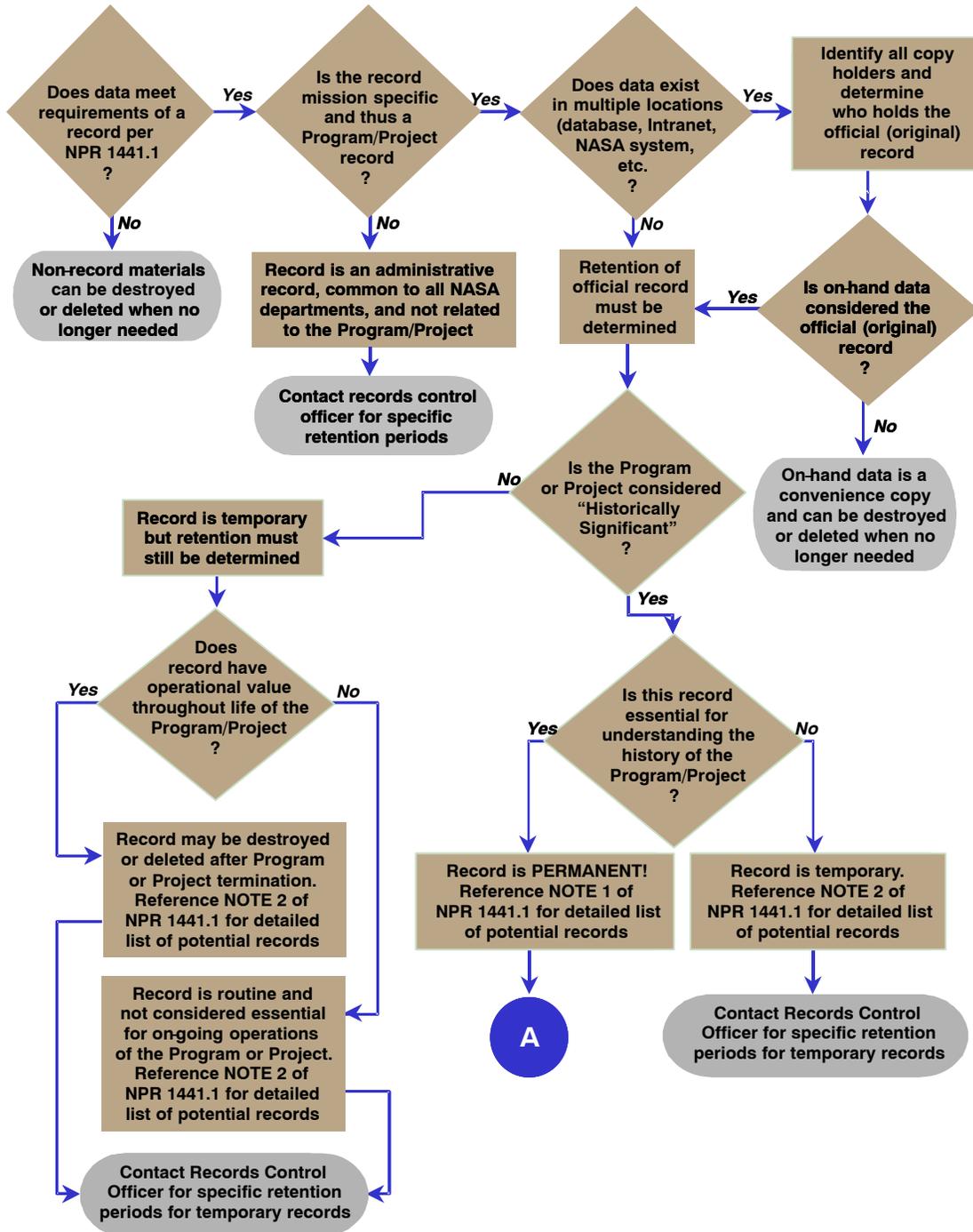


FIGURE H-1
RECORDS ARCHIVAL PROCESS - Concluded

