FY011

Department of Defense

Human Systems Integration Management Plan

Version 1.0

Office of the Director Defense Research and Engineering
Director, Mission Assurance
Director, Human Performance, Training & Biosystems

FY011 Department of Defense Human Systems Integration Management Plan

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FY011 Department of Defense
Human Systems Integration Management Plan

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this document is to provide a comprehensive Human Systems Integration (HSI) management plan for the Department of Defense (DoD).

1.2 Objective

The objective of this plan is to establish formal responsibility, authority, and accountability for Human Systems Integration within the DoD.

This plan encompasses the HSI organizational structure, roles, responsibilities, processes, tasks, metrics, and enabling resources, and formalizes both horizontal and vertical communications between Office of the Secretary of Defense (OSD) and the Services. The planning process will be a living process that responds to needs and improved methods of doing business. At a minimum, the HSI management plans will be reviewed and updated on a yearly basis. This plan is not intended to become a tool for micromanagement but a mechanism for good leaders to make the right decisions. Through collaboration and effective coordination, the Department will effectively leverage HSI knowledge and best practices across the Services, which will result in accelerating the maturity of HSI implementation within the DoD.

The DoD HSI Management Plan structure is shown in Figure 1-1. The DoD HSI Management Plan provides the DoD overarching plan and the respective Services plans, represented as annexes, provide the detailed plans. Combined they reflect the HSI Management approach within the DoD.

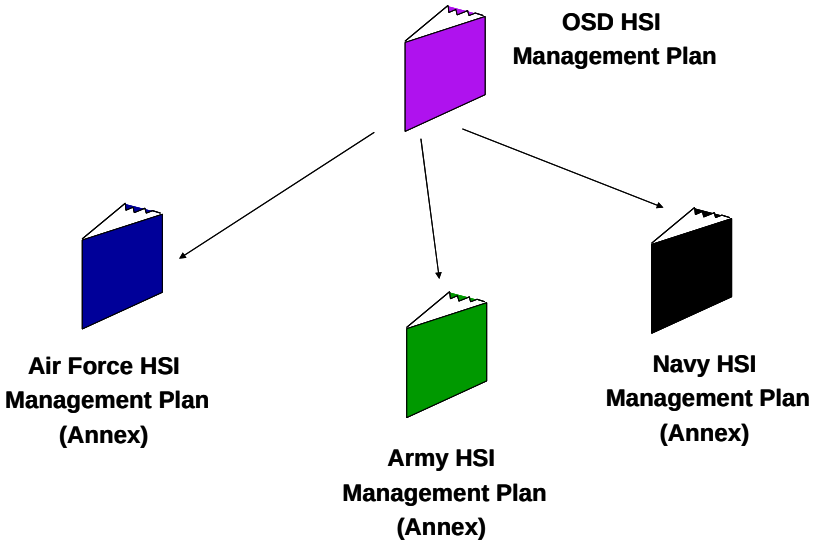


Figure 1-1 DoD HSI Plan Structure

1.3 Scope

The scope of this plan describes the approach on how HSI is managed within the Department to fulfill statute defined in H5159 Section 231, Responsibility for HSI and USD (AT&L) memorandum April 3, 2008. The plan describes OSD HSI governance, roles and responsibilities between the Director of Mission Assurance and Director of Human Performance, Training and Biosystems who co-chair the Joint HSI Steering Committee.

1.4 Overview of Human Systems Integration

The human and ever increasingly complex defense systems are inextricably linked. Systems, composed of hardware and software, enable the ability of humans to perform tasks that successfully project combat power in difficult and lethal environments. High levels of human effectiveness are typically required for a system to achieve its desired effectiveness. The synergistic interaction between the human and the system is key to attaining improvements total system performance and minimizing total ownership costs. Therefore, to realize the full and intended potential that complex systems offer, the Department must apply continuous and rigorous approaches to HSI to ensure that the human capabilities are addressed throughout every aspect of system acquisition.

The DoD has embraced HSI as a systemic approach. The concept of HSI embraces the total human involvement with the system throughout its life cycle. Furthermore, DoDI 5000.02 Enclosure (8) states that:

> [The goal of HSI is] "to optimize total system performance, minimize total ownership costs, and ensure that the system is built to accommodate the characteristics of the user population that will operate, maintain, and support the system."

In summary, this means that the human in acquisition programs is given equal treatment to hardware and software.

1.4.1 The Elements of HSI

HSI consists of eight elements representing the key aspects and disciplines that address the human involvement (users, maintainers, trainers, system owners) with the system throughout its life cycle. These elements must be synergistically applied in the context of the system, or material solution, under development. DoDI 5000.02 Enclosure (8) stipulates the following:

- *Human Factors Engineering*. The PM shall take steps (e.g., contract deliverables and Government/contractor IPT teams) to ensure ergonomics, human factors engineering, and cognitive engineering is employed during systems engineering over the life of the program to provide for effective human-machine interfaces and to meet HSI requirements. Where practicable and cost effective, system designs shall minimize or eliminate system characteristics that require excessive cognitive, physical, or sensory skills; entail extensive training or workload-intensive tasks; result in mission-critical errors; or produce safety or health hazards.

- *Personnel*. The PM shall work with the personnel community to define the human performance characteristics of the user population based on the system description, projected characteristics of target occupational specialties, and recruitment and retention trends. To the extent possible, systems shall not require *special cognitive*, physical, or sensory skills beyond that found in the specified user population. For those programs that have skill requirements that exceed the knowledge, skills, and abilities of current military occupational specialties, or that require additional skill indicators or hard-to-fill military occupational specialties, the PM shall consult with personnel communities to identify readiness, personnel tempo, and funding issues that impact program execution.

- *Habitability*. The PM shall work with habitability representatives to establish requirements for the physical environment (e.g., adequate space and temperature control) and, if appropriate, requirements for personnel services (e.g., medical and mess) and living conditions (e.g., berthing and personal hygiene) for conditions that have a direct impact on meeting or sustaining system performance or that have such an adverse impact on quality of life and morale that recruitment or retention is degraded.

- *Manpower*. In advance of contracting for operational support services, the PM shall work with the manpower community to determine the most efficient and cost-effective mix of DoD manpower and contract support. The mix of military, DoD civilian, and contract support necessary to operate, maintain, and support (to include providing training) the system shall be determined based on the Manpower Mix Criteria and reported in the Manpower Estimate. Economic analyses used to support workforce mix decisions shall use costing tools that account for fully loaded costs–i.e., all variable and fixed costs, compensation and non-compensation costs, current and deferred benefits, cash and in-kind benefits. Once the Manpower Estimate is approved by the DoD Component manpower authority, it shall serve as the authoritative source for reporting manpower in other program documentation.

- *Training*. The PM shall work with the training community to develop options for individual, collective, and joint training for operators, maintainers and support personnel, and, where appropriate, base training decisions on training effectiveness evaluations. The PM shall address the major elements of training, and place special emphasis on options that enhance user capabilities, maintain skill proficiencies, and reduce individual and collective training costs. The PM shall develop training system plans to maximize the use of new learning techniques, simulation technology, embedded training and distributed learning (DoD Instruction 1322.26 (Reference (be))), and instrumentation systems that provide "anytime, anyplace" training and reduce the demand on the training establishment. Where possible, the PM shall maximize the use of simulation-supported embedded training, and the training systems shall fully support and mirror the interoperability of the operational system (DoD Directive 1322.18 (Reference (bf))).

- *Safety and Occupational Health*. The PM shall ensure that appropriate HSI and ESOH efforts are integrated across disciplines and into systems engineering to determine system design characteristics that can minimize the risks of acute or chronic illness, disability, or death or injury to operators and maintainers; and enhance job performance and productivity of the personnel who operate, maintain, or support the system.

- *Survivability*. For systems with missions that might require exposure to combat threats, the PM shall address personnel survivability issues including protection against fratricide, detection, and instantaneous, cumulative, and residual nuclear, biological, and chemical effects; personnel survivability against asymmetric threats; the integrity of the crew compartment; and provisions for rapid egress when the system is severely damaged or destroyed. The PM shall address special equipment or gear needed to sustain crew operations in the operational environment, including the suitability of equipment intended to enhance personnel survivability against asymmetric threats."

1.4.2 Role of Systems Engineering and HSI

Many of the defense acquisitions systems today are too complex for a single discipline to define, design, integrate, test and deploy. The successful development of complex systems requires a team of program managers, systems engineers, and specialty engineers that spans the knowledge domains and

competencies applied synergistically in all aspects of the system development life cycle. The role of the systems engineer is to orchestrate the involvement of the specialty engineering disciplines to achieve the best possible solution that meets the need. HSI is a meta discipline similar to systems engineering, but with the primary focus on how best to integrate the human aspect and fully achieve the synergy with the hardware and software. HSI is complex in itself, whereby the eight elements (Human Factors Engineering, Personnel, Habitability, Manpower, Training, Safety, Occupational Health, and Survivability) are combined synergistically to address all aspects of the human involvement with the system. To achieve improvements in total system performance and total ownership costs, HSI must be an integral consideration through the trade study process from concept through implementation.

1.4.3 Role of Science and Technology and HSI

While systems engineering is concerned with the effective integration of HSI requirements for a given system, Science and Technology (S&T) is concerned with the Human Systems technology area that enables the human component in the system to be fully accommodated and effective. Innovative technologies that enhance human capabilities must find their way into system solutions early in the acquisition life cycle. Likewise, human science considerations are fundamental to understanding the limits of human capabilities under varying environmental conditions. For example, human performance models can be developed to aid systems engineers in appropriately characterizing human involvement as the system design is stressed under different operationally-relevant conditions that stress the human component. The Human Systems S&T technology area is a key complement to systems engineering when defining, developing, verifying, and validating systems.

Technological superiority is a principal characteristic of the U.S. military advantage. The objective of the DoD Science and Technology (S&T) program is to develop options for decisive military capabilities based on superior technology. The Office of the Director of Defense Research and Engineering (DDR&E) is responsible for the direction, overall quality, and content of the DoD S&T program; it develops strategies and supporting plans to exploit and develop technology to respond to the needs of the Services and to maintain U.S. technological superiority. DDR&E ensures that DoD technology investments are focused on the highest payoff areas and that related efforts by the Services and defense agencies are complementary. The key “defense technology area” supporting HSI is “human systems”.

The Human Systems technology area provides technologies and methods to ensure that the military's most critical resource—its people—are properly selected, trained, and equipped to perform as effectively and as safely as possible. Cost reduction through more efficient use of personnel and equipment is a key secondary goal. The Human Systems technology area has at least four domains that support HSI goals; they include: information display and performance enhancement; design integration and supportability; warrior protection and sustainment; and, personnel performance and training. The domains have some of the following characteristics:

- Information display and performance enhancement technologies support data visualization and situational understanding, aural and visual interface, immersive interface, intelligent aiding and decision support, decision-centered staff process control, supervisory control and teleoperation, and physical aiding.

- Design integration and supportability advances the state of the art in human system design tools, performance requirements estimation, performance metrics, human-system integration, logistics readiness, and sustainment logistics.

- Warrior protection and sustainment technologies provides full-spectrum personal protection; troop sustainment, including rations and field feeding equipment; aircraft escape/crash safety, survival, and rescue; advanced airdrop (both personnel and cargo); and dismounted, mounted, and aircrew warrior systems integration, including warfighter systems analysis.

- Personnel performance and training technologies advance force management and modeling tools, selection and classification approaches, human resource development, simulation-based training, training strategies, and training efficiency.

A key to force lethality, survivability, and unit efficiency is the effective use of human resources. People are the most critical and the most costly component of the military systems. Personnel and related costs have been shown to exceed $70 billion annually, with an additional $20–$30 billion spent on training (ref. 2007 Defense Technology Area Plan, page 39). The Human Systems defense technology area directly contributes to all Joint Staff future warfighting capabilities by optimizing the use of the DoD's most vital resource—its people.

The Human Systems area also addresses the human in an integrated and systematic way; it treats the military system as an integrated "platform" across the

breadth of ships, aircraft, and land vehicles, but having an added focus on human cognition. The Human Systems technology area employs a multidisciplinary approach to the human role in combat operations. Its collective capability to draw on the physical, biological, biomedical, and behavioral sciences plus the engineering discipline is the essential science component of HSI.

Through vigorous application of Human Systems technologies to current and future weapons systems, operational gains can be achieved. These gains include the following: significant reductions (approximately 25 percent) in physical, perceptual, and cognitive workload, which could, in turn, reduce the average crew and command staff size by up to 33 percent; 20 percent or more reduction in the weight of personal equipment; 30 percent weight reduction in improved ballistic protection; doubling of critical decision making accuracy and reliability; 80 percent reduction in fatalities and injuries from aircrew escape; and 50 percent reduction in total life-cycle costs (ref. 2007 Defense Technology Area Plan, page 39).

To maintain technological superiority—a principal characteristic of the U.S. military advantage—the DoD Human Systems area will continue to invent, develop, and harness technology to optimize the practice of HSI.

2.0 HSI ORGANIZATION ROLES AND RESPONSIBILITIES

2.1 OSD HSI Management Organization Overview

The OSD HSI organization structure is shown below in Figure 2-1. Based on the direction contained in the OUSD(AT&L) memo [Young, 2008], HSI management responsibility in AT&L is a shared responsibility within DDR&E Systems Engineering for managing the execution of HSI activities on acquisition programs, and the Director of Human Performance, Training & Biosystems for Science and Technology-related matters and their relationship to acquisition programs. These DDR&E directorate organizations must also work with the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD(P&R)), which has statutory responsibility for HSI policy and guidance.

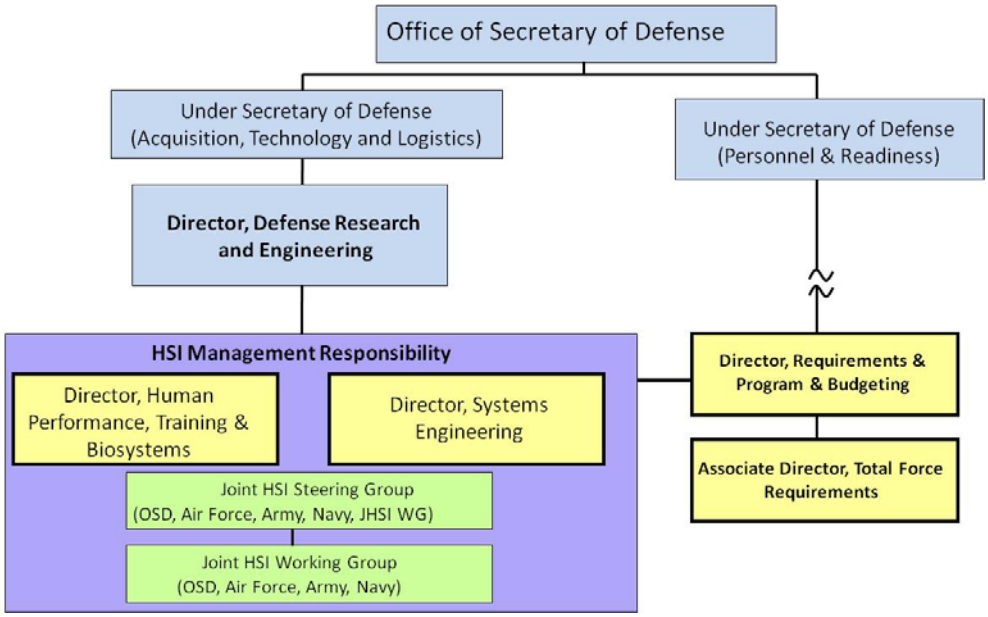


Figure 2-1 OSD HSI Management Organization

Figure 2-2 further defines the relationships and functional responsibilities between OSD, Joint HSI Steering Committee (JHSISC), Joint HSI Working Group (JHSIWG), and Service reporting relationships. One of the objectives of this HSI Management Plan is to formalize vertical and horizontal communications between all HSI organizations. To achieve this, the JHSISC serves as the coordination and communication body between OSD and the Services. The JHSISC is co-chaired by DDR&E (D,SE/Mission Assurance and D, Human Performance, Training & Biosystems), with participation from each of the Services HSI senior representatives, OUSD(P&R) and the JHSIWG Chair. The JHSISC provides the platform to share knowledge and issues and assess the status

of achieving joint and organization-specific goals. The JHSIWG is an organization that supports the JHSISC and serves as the joint technical coordination body for all DoD HSI-related matters.

Section 2.2 of this document further describes the respective roles, responsibilities, and relationships within the scope of this plan.

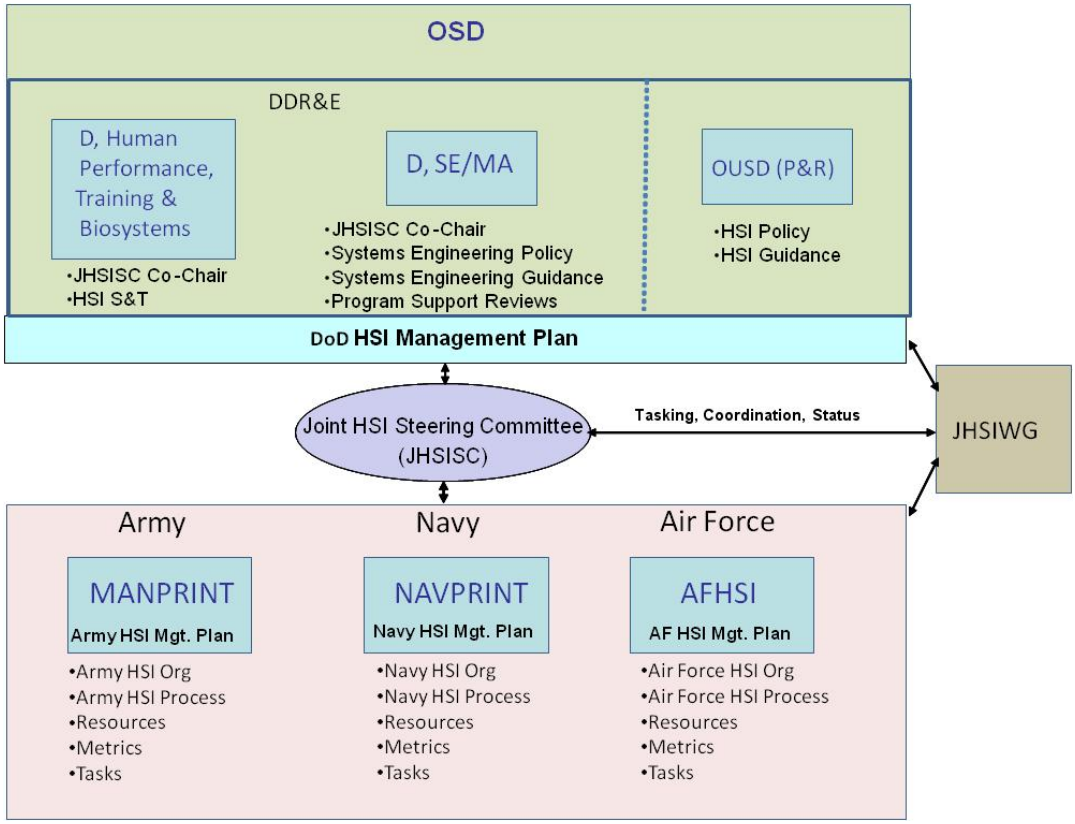


Figure 2-2 OSD Management Plan Relationships

2.2 HSI Description of Organization Roles and Responsibilities

To achieve both horizontal and vertical communications and integration among OSD and the Services, the following OSD organization roles and responsibilities are defined:

2.2.1 Director, Systems Engineering (D, SE)

- Responsible for the management of HSI activities for acquisition programs within the DoD in a co-leadership role with Director, Human Performance, Training & Biosystems.

- D, SE has delegated this responsibility to the Director of Mission Assurance (D, SE/MA).

2.2.2 Director, Mission Assurance (D, SE/MA)

- Co-chairs the Joint HSI Steering Committee.

- Calls Joint HSI Steering Committee meetings based on need, not to exceed a biannual basis.

- Coordinates with OUSD(P&R), systems engineering acquisition policy and guidance and ensures alignment with HSI policy and guidance.

- As necessary, co-develops Department of Defense Instructions or Directives with the Director, Human Performance, Training & Biosystems, in coordination with OUSD(P&R) and others, specific to human systems integration activities [H5159, HSI, SEC 231], [Young, 2008].

- In coordination with the Director, Human Performance, Training & Biosystems, identifies and recommends, as appropriate, Department resource requirements for human systems integration [H5159, HSI, SEC 231], [Young, 2008].

- In coordination with the Director, Human Performance, Training & Biosystems, supervises the planning, management, and coordination of HSI activities [H5159, HSI, SEC 231], [Young, 2008].

- Reviews Services HSI Management Plans and assesses progress against plans.

- Coordinates inter-OSD HSI-related initiatives that strengthen HSI integration within DoD acquisition.

- Plans Program Support Reviews (PSRs) in accordance with DoDI 5000.02 paragraph 9 (f), and reports HSI findings to the JHSISC.

- In coordination with the Director, Human Performance, Training & Biosystems, reviews and approves changes to the HSI Management Plan.

- In coordination with the Director, Human Performance, Training & Biosystems, reviews the JHSIWG Action Plan.

- Develops the HSI Management Plan in coordination with Human Performance, Training & Biosystems and Services HSI leads.

- Directs the JHSIWG in accordance with the JHSIWG charter.

2.2.3 Director, Human Performance, Training & Biosystems

- Responsible to DDR&E for the management of HSI on DoD acquisition programs, as related to Science and Technology.

- Co-Chairs the Joint HSI Steering Committee.

- As necessary, co-develops Department of Defense Instructions or Directives with Director, Mission Assurance in coordination with OUSD (P&R) and others, specific to human systems integration DoD acquisition activities [H5159, HSI, SEC 231], [Young, 2008].

- In coordination with Director, Mission Assurance, identifies and recommends, as appropriate, Department resource requirements for human systems integration [H5159, HSI, SEC 231], [Young, 2008].

- In coordination with Director, Mission Assurance, supervises the planning, management, and coordination of HSI activities [H5159, HSI, SEC 231], [Young, 2008].

- In coordination with the Director, Mission Assurance, reviews and approves changes to the HSI Management Plan.

- In coordination with the Director, Mission Assurance, reviews and approves the JHSIWG Action Plan.

- Contributes to the Joint HSI Steering Committee on S&T-related tasks and progress against plans.

- Coordinates Science and Technology input to the Joint HSI Steering Committee from Services.

- Is the Proponent for the Human Factors Engineering Technical Advisory Group (HFE-TAG) as an external Science and Technology advisory group.

2.2.4 OUSD Personnel and Readiness

- Participates in the Joint HSI Steering Committee.

- Develops and maintains HSI policy and guidance and ensures alignment with systems engineering policy and guidance.

- Participates and contributes to the Joint HSI Working Group.

2.3 Committees and Working Groups

2.3.1 Joint HSI Steering Committee

- The Joint HSI Steering Committee is to provide a forum for executive-level collaboration on HSI activities regarding the management of HSI activities throughout DoD acquisition programs.

- The Joint HSI Steering Committee shall be co-chaired by the Director, Mission Assurance, and the Director, Human Performance, Training & Biosystems. The co-chairs shall:

- Develop the meeting agenda.
- Call meetings on as needed basis, but not to exceed a biannual basis.
- Review HSI planning accomplishments and progress against plans.
- Direct or consult with the JHSIWG on key task areas that needed addressing.

The Joint HSI Steering Committee shall consist of:

- D, MA: Co-Chair
- Director, Human Performance, Training & Biosystems: Co-Chair.
- Senior executive from OUSD(P&R).
- Army MANPRINT senior representative.
- Navy HSI senior representative.
- Air Force Air Force HSI senior representative.
- JHSIWG Chair.

2.1.1 2.3.2 Joint HSI Working Group

The JHSIWG was established in 2005 to bring together the Services with the objective of sharing knowledge and expertise and to address cross-cutting HSI issues in a joint collaborative manor. The JHSIWG serves as an integral part of the HSI management structure, represents expertise from all DoD organizations (OSD, Air Force, Navy, and Army), and is an excellent collaborative entity to enable integration in the DoD. The JHSIWG will:

- Adhere to the JHSIWG Charter [JHSIWG Charter, 2007] (as currently defined). If there is conflict between this plan and the charter, the issue should be raised and resolved at the JHSISC.
- JHSIWG Chair attends JHSISC meetings and provides advice as needed.
- Submit a JHSIWG Action Plan on an annual basis.
- Report progress against the approved JHSIWG Action Plan to the JHSISC.
- Suggest tasks based on needs and issues to be addressed to the JHSISC and amends the JHSIWG Action Plan accordingly.

3.0 LIFE CYCLE PROCESSES AND HSI

The objective of Human Systems Integration is to appropriately integrate the human into the system design to optimize total system effectiveness. To accomplish this, all aspects of human interaction with the system must be understood to the highest degree possible to optimize the system and human capabilities. For each program or system, different emphasis is placed on the human interaction depending on the type of system and its mission and environment. To accomplish the complex task of integrating the human into the system development process, OSD has adapted ISO 15288 and associated 16 technical management and technical processes for engineering systems. These processes provide the overarching process definition that incorporates all technical and management tasks for defining, designing, implementing, integrating, verifying, and validating a system. These 16 processes are described in detail within the systems engineering section of DAG Chapter 4. Figure 3-1 shows the respective 16 processes, and Figure 3-2 provides a notional flow of effort related to the technical processes over the system development life cycle. Figure 3-2 illustrates that the processes are continuous, and it is implied that they interact with one another to accomplish the objective of engineering a system.

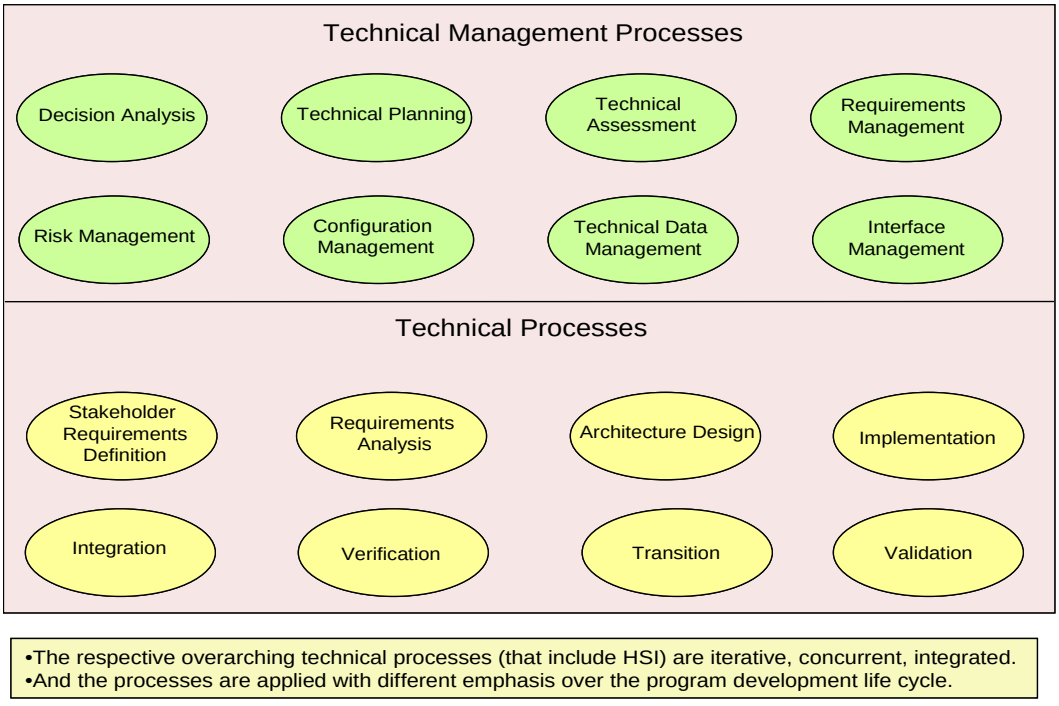
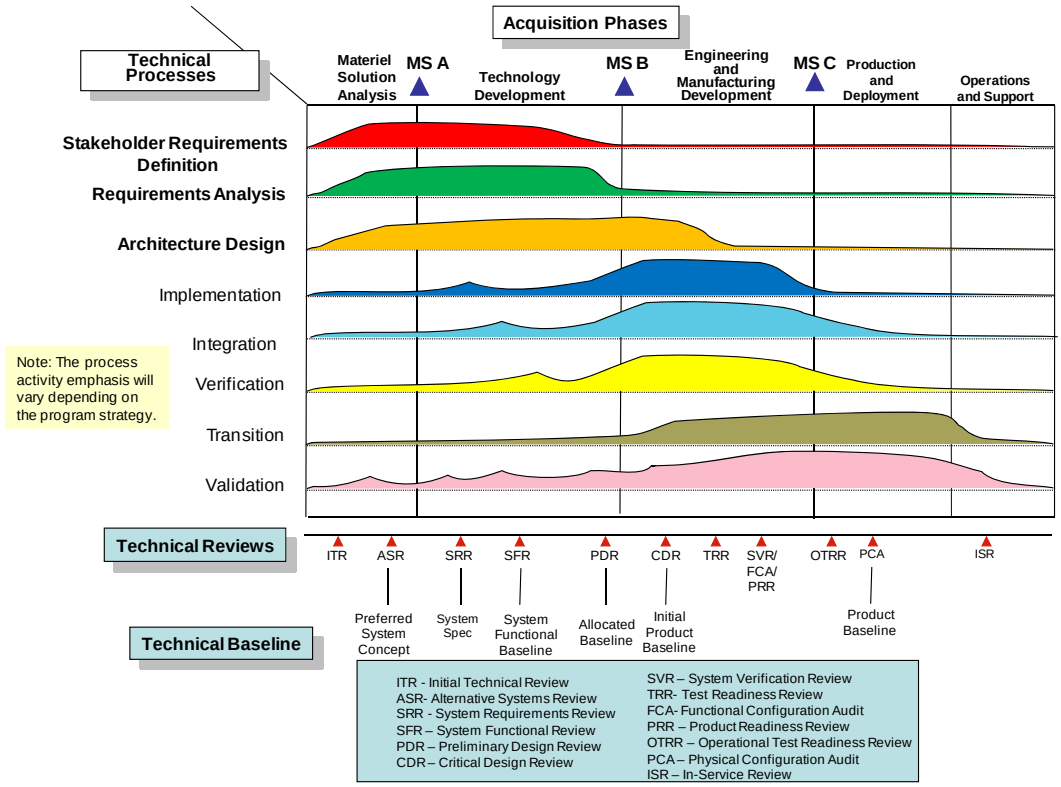


Figure 3-1 Life Cycle Processes for Engineering Systems



Source: DAG Chapter 4

Figure 3-2 Notional View of Technical Life Cycle Process on a Program

HSI activities reside within the context of these 16 life cycle processes for engineering a system. DAG Chapter 4 incorporates HSI as a design consideration, where a design consideration is one facet of the overall development effort that must be balanced against other design considerations and with the overall system function, performance, and constraint requirements. The key to success of HSI is to effectively integrate and balance HSI requirements along with all the design considerations to achieve the best possible design. The intent of these 16 life cycle processes is to accommodate all system requirements.

For detailed guidance on HSI and its role within the 16 life cycle processes, refer to DAG Chapter 6, which defines specifically the activities performed within the HSI domain.

4.0 OSD HSI ACQUISITION MANAGEMENT SYSTEM INTEGRATION

Section 3 of this document established the life cycle processes for engineering a system with references to DAG Chapter 4 for Systems Engineering and DAG Chapter 6 for HSI. In the acquisition of systems, DoDI 5000.02 establishes acquisition policy that defines the statutory and regulatory requirements for all DoD system acquisitions. While HSI should be considered when any technology decisions are being made, policy requires that it must be explicitly addressed in key acquisition documents that specifically call for HSI. These documents are multifaceted in that they span technology, economics, threats, manpower, and the effectiveness of the system. The documents listed in Table 3 are an extract from DoDI 5000.02 Enclosure (4), which contains both statutory and regulatory acquisition documents that either specifically call out HSI or indicate that HSI should be a key consideration within a given document. The DAG provides supporting guidance on how to develop the information that these key acquisition documents require. Table 3 is evidence of how HSI has been integrated into the acquisition management system, which is further implemented and refined within the respective Services and agencies.

Table 4-1 Statutory and Regulatory Requirements That Include HSI Applicable to MDAPs and MAIS Acquisition Programs

Key Acquisition Document	S/R*	When required	HSI Involvement
Analysis of Alternatives (AoA)	S	ACAT 1 and regulatory for all others. Program initiation for Ships and MS A/B/C (Updated as necessary)	Calls for manpower impacts and trade space alternatives
Initial Capabilities Document (ICD)	R	Materiel Development Decision MS A MS B MS C (if Program Initiation)	CJCSI3170.1 JCIDS policy calls for HSI to be addressed in the capabilities definition process.
Capabilities Definition Document (CDD)	R	Program Initiation for Ships MS B	CJCSI3170.1 JCIDS policy calls for HSI to be addressed in the capabilities definition process.

Key Acquisition Document	S/R*	When required	HSI Involvement
Acquisition Strategy	R	Program Initiation for Ships MS B MS C Full-Rate Production DR (or Full Deployment DR)	Specifically calls for a technical and management approach at meeting HSI requirements.
Manpower Estimate	S	Program Initiation for Ships MS B MS C Full-Rate Production DR	One of the eight elements of HSI and informs the MDA.
Technology Development Strategy (TDS)	S (ACT I) R (ACT II and below)	MS A	The role of HSI should influence the competitive prototyping strategy to validate and refine requirements and guide systems engineering planning efforts.
Systems Engineering Plan (SEP)	R	MS A MS B MS C	Policy requires HSI to be included in systems engineering technical planning.
Test and Evaluation Master Plan (TEMP)	R	MS B MS C (update, if necessary) Full-Rate Production DR (or Full Deployment DR)	Used to verify that HSI requirements are implemented satisfactorily.

*Note: S –Statutory, R- Regulatory

5.0 OSD HSI ASSESSMENT PROCESS

OSD performs Program Support Reviews (PSRs) to inform the Milestone Decision Authority (MDA) prior to major milestone reviews on ACAT ID and ACAT IAM programs. For a description of acquisition program designation and decision authority, refer to DoDI 5000.02 Table 1.

PSRs are directed by the D, SE to support the Overarching Integrated Product Teams (OIPT), or by OUSD(AT&L) when requested by the program manager (PM) [Ref: 5000.02]. Each PSR is staffed by OSD and conducts the PSR in accordance with the Defense Acquisition Program Support (DAPS) Methodology. This DAPS methodology contains detailed questions that cover the full scope of current policy and guidance, which includes HSI, and the selected programs are evaluated against the DAPS. Both positive and negative findings are collected and captured in the Systemic Analysis Database (SADB) from which post-analysis is conducted to determine system, including HSI, root causes of problems.

Furthermore, OSD reviews all Systems Engineering Plans (SEPs) and for compliance with acquisition policy. The SEP will provide insight for technical planning, which is required by policy to include HSI. SEP findings are documented and also serve as a source of information for the JHSISC.

6.0 DOD HSI INFORMATION WEB PORTAL

To facilitate knowledge sharing and information exchange across the DoD HSI community, a Defense Acquisition University (DAU) Acquisition Community Connect (ACC) Web portal, as shown in Figure 7-1, has been established that posts all DoD HSI management-relevant information. As an overview, this site contains HSI Management Plans for the OSD, Services, and agencies, and the JHSISC and JHSIWG meeting artifacts. This site is currently restricted to members of the DoD HSI community. For access to this Web portal, please contact Stuart Booth at stuart.booth.ctr@osd.mil. The site location is https://acc.dau.mil/hsimgmt.

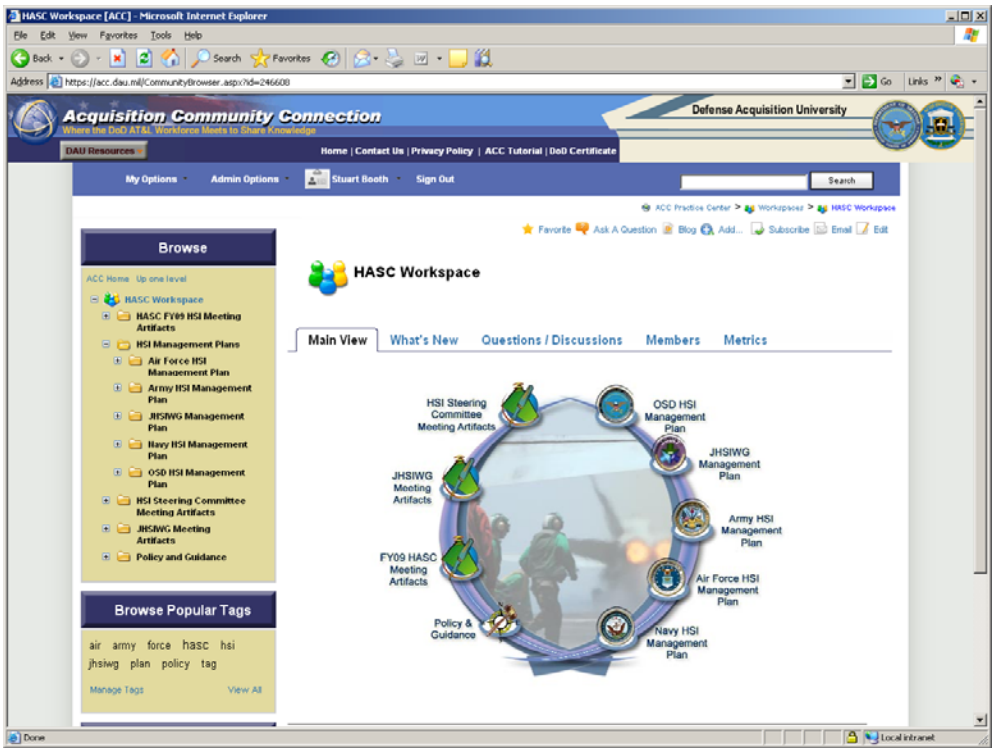


Figure 7-1 HSI Management Web Portal

7.0 SERVICES AND AGENCIES SUPPORTING HSI MANAGEMENT PLANS

The Services supporting plans are posted on the DAU ACC and the DDR&E websites.

8.0 DOD HSI TASK AREAS

The Joint HSI Working Group has delineated four general task areas for strengthening the maturity of HSI within the DoD. Figure Appendix 8-1 represents the four areas: Policy and Process, Information Sharing and Coordination, R&D Technology and HSI Competency with further detailing of the respective task areas. Joint efforts to strengthen HSI fall into one or more of these four task areas and is administered through the Joint HSI Working Group.

In concert with Services, HSI Management Plan activities can be mapped to one of these task areas. The JHSISC, JHSIWG and HSI Service leads work together to maximize information sharing and utilization of resources to make progress in each of these areas. For further details on specific tasks, please refer to the individual Service HSI Management Plan Annexes.

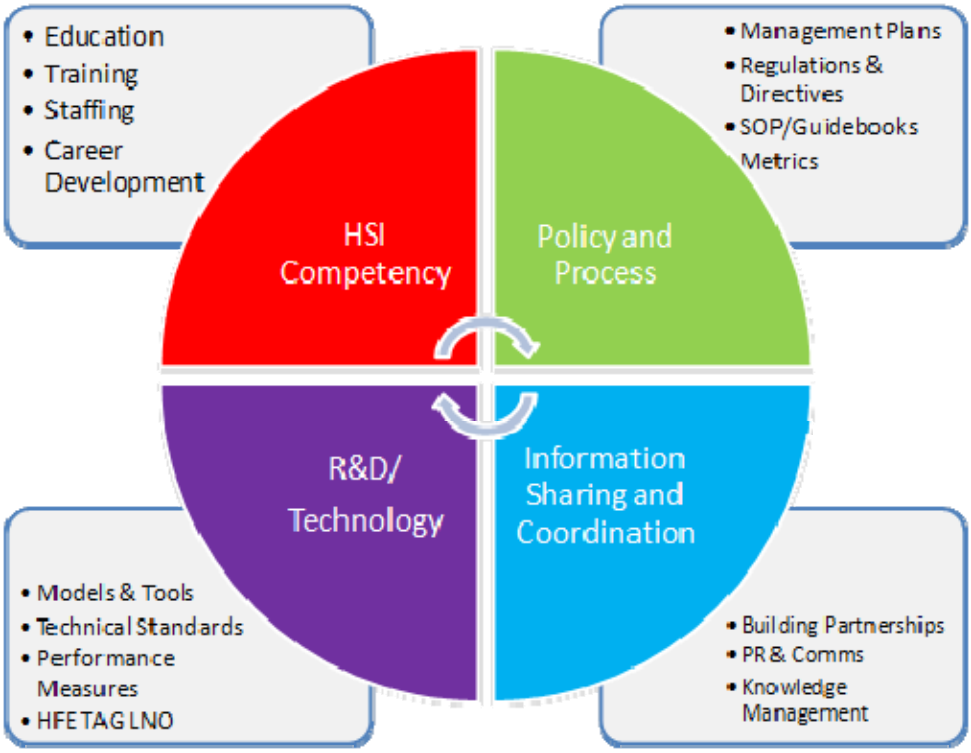


Figure 8-1 HSI Task Areas

9.0 DOCUMENT REVISION HISTORY

The OSD HSI Management Plan is a living plan. As conditions change and lessons are learned, this plan will be updated and coordinated within OSD. The document revision history will be maintained for the life of this plan.

Table 1-1 Document Revision History

Version	Date	Description	Status
1.0	8 November 2010	Original	Current

10.0 REFERENCES

Table 1-1 References

Title	Doc. No.	Version	Date
[Young, 2008], OUSD(AT&L) Memorandum for Secretaries of Military Departments Designation of Senor Official to Coordinate and Manage Human Systems Integration (HSI) Activities Throughout the Acquisition Programs of the Department of Defense (DoD)	N/A	N/A	3 April 2008
Duncan Hunter National Defense Authorization Act For Fiscal Year 2009	Report 110-652	N/A	2008
[H5159 SEC 231], Responsibility for Human Systems Integration Activities	H5159		16 May 2007
Defense Acquisition Program Support (DAPS) Methodology	N/A	V 2.0	2008
[5000.02], Department of Defense Instruction	5000.02	N/A	8 December 2008
[DAG], Defense Acquisition Guide – Web based document			
[JHSIWG Charter, 2007], Charter, Joint Human Systems Integration Working Group		Draft	2007
[DoD HSI Coverage and ROI Report, 2008], Human Systems Integration in DoD Weapons Acquisition Programs: Part III, Program Coverage and Return on Investment	N/A	N/A	March, 2008
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Note: The listed references can be accessed via https://acc.dau/mil/hsimgmt

ACRONYMS

A&T	Acquisition and Technology
ACAT	Acquisition Category
ACC	Acquisition Community Connection
AoA	Analysis of Alternatives
ASD	Assistant Secretary of Defense
CDD	Capabilities Definition Document
DAB	Defense Acquisition Board
DAG	Defense Acquisition Guidebook
DAPS	Defense Acquisition Program Support Methodology
DDR&E	Director of Defense Research and Engineering
DoD	Department of Defense
DoDAF	Department of Defense Architecture Framework
DUSD	Deputy Under Secretary of Defense
DSOC	Defense Safety Oversight Committee
ESOH	Environment, Safety, and Occupational Health
FTE	Full-Time Equivalent
GEIA	Government Electronics and Information Technology Association
JCIDS	Joint Capabilities Integration and Development System
JHSISC	Joint Human Systems Integration Steering Committee
JHSIWG	Joint Human Systems Integration Working Group
HCI	Human Capital Initiative
HFE-TAG	Human Factors Engineering Technical Advisory Group
HSI	Human Systems Integration
ICD	Initial Capabilities Document
INCOSE	International Council on Systems Engineering
ISO	International Organization for Standardization
KPP	Key Performance Parameter

KSA	Key System Attribute
MS	Milestone
MAIS	Major Automated Information System
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
NDIA	National Defense Industrial Association
OSD	Office of the Secretary of Defense
OUSD(AT&L)	Office of the Under Secretary of Defense for Acquisition, Technology
OIPT	Overarching Integrated Product Teams
OT&E	Operational Test and Evaluation
P&R	Personnel and Readiness
PM	Program Manager
PSR	Program Support Review
ROI	Return on Investment
SADB	Systemic Analysis Data Base
SEP	Systems Engineering Plan
SE	Systems Engineering
SE/MA	Systems Engineering/Mission Assurance
TDS	Technology Development Strategy
TES	Test and Evaluation Strategy
TEMP	Test and Evaluation Master Plan
S&T	Science and Technology
USD	Under Secretary of Defense