

Headquarters U.S. Air Force

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Air Force Human Systems Integration



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SAF/AQ - AFHSIO
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AF Human Systems Integration Office (AFHSIO)

- **Mission:** Provide policy, management, oversight and technical guidance for the AF Human Systems Integration (HSI) process. Ensure humans are considered as a vital part of every system, on par with hardware and software.
- AFHSIO supports the SAE, MAJCOMs, PEOs, PMs, Systems Engineers, and others addressing **manpower, personnel, training, environment, safety, occupational health, habitability, survivability, and human factors engineering** considerations in the requirements, analysis, development, acquisition and sustainment of all AF systems.





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AFHSIO Objectives

- **Integrate HSI into functional domains**
 - Into the AT&L life cycle management framework
 - Build AF team to equip, enhance, sustain the warfighter
- **Institutionalize HSI as a way of doing business**
 - Increase total system performance
 - Decrease total ownership costs
- **Sustain HSI in systems acquisition**
 - Collaboration w/ OSD, Sister Services, Industry and Academia
 - Improve support to programs
- **Improve HSI**
 - Feedback and lessons learned from the operational, logistics and acquisition communities
- **Demonstrate value added to the Air Force**



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Integrate HSI

- **Sprinkle vs. Stovepipe**
- **No single Air Force Instruction, but layered into many; e.g.:**
 - **DoDD 5000.01, *The Defense Acquisition System***
 - **DoDI 5000.02, *Operation of the Defense Acquisition System***
 - **AFI 10-601, *Operational Capability Requirements Development***
 - **AFI 63-101, *Acquisition and Sustainment Life Cycle Mgmt***
 - **AFI 63-1201, *Life Cycle Systems Engineering***
 - **AFI 99-103, *Capabilities-Based Test and Evaluation***
 - **AFPD 63-1/20-1, *Acquisition and Sustainment Life Cycle Mgmt***



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Institutionalize HSI

- **HSI analysts at ACC, AMC, AFSOC, AETC, and AFMC**
 - **Completed DAU's Requirements Management Certification Training (RMCT) program**
 - **Participate in the development of the analysis products (e.g., CBAs and AoAs) and in the HPT process**
 - **Develop relationships within the user MAJCOMs**
- **Reviewed >220 JCIDS documents, >97% comment acceptance**
 - **Left of Milestone A – early “eyes on” ensures an HSI look at system design and acquisition**
- **AFHSIO Director is advisor at the AFROC**



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Sustain HSI

- **Joint HSI Steering Committee at the OUSD(AT&L) level**
- **Joint HSI Working Group at the Service level**
- **2010 workshops:**
 - **Improve HSI specifications, standards and descriptions**
 - **Identify measures of effectiveness, performance and suitability**
 - **Standardize T&E techniques and improve measurement methods and tools**
 - **Strengthen HSI in the SEP / LCMP / TES / TEMP**



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Improve HSI

- **Education and Training**
 - **Launched DAU CLE 062, *Awareness of HSI*, in June 2010**
 - **Reviewed DAU ACQ 101, SYS 101, SYS 202, TST 102, LOG 101, and LOG 200 for HSI inclusions**
 - **Reviewed AFIT LOG 199, SYS 139, 172, 182, 183, 229, 281, 282, and 283 (*SE, T&E, etc.*) for HSI inclusions**
 - **Developing AFIT SYS 160 (CBT, *Intro to HSI*); SYS 261 (asynchronous, *HSI in Rqmts*); SYS 260 (2.5-day classroom)**
- **Case Studies – showcase earned value of early HSI involvement**
 - **C-17, RPA, F-22 in progress**



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Future Projects

- **AMFC Implementation Plan**
 - Expected inclusion in AFMCI 63-1201 IC2, currently in staffing
 - Expected to guide HSI execution in AFMC and all its Centers
- **Working with Systems Centers on the AF Form 1067 process**
 - AF1067 is a modification proposal, used to document the submission, review, and approval of temporary and permanent sustainment modifications
 - Attempting to close the gap between engineers and the users
- **Working with the Air Staff on the manpower and personnel issues in the systems acquisition process**
 - Get issues to PMs early to drive design trade-offs, rather than “get stuck” with the design later



HSI
HUMAN SYSTEMS
INTEGRATION

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Summary

Human Systems Integration is the integration of the human into the engineering of a system

- **HSI considers the human-related aspects (i.e., *liveware*) equally with other aspects of the system (i.e., *software* and *hardware*)**
- **HSI takes a holistic view of systems development, acquisition, and fielding to consider all users: operator, maintainer, logistician, trainer, supporter, customer, etc.**



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AFHSIO Team

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