



Human Systems Col Overview

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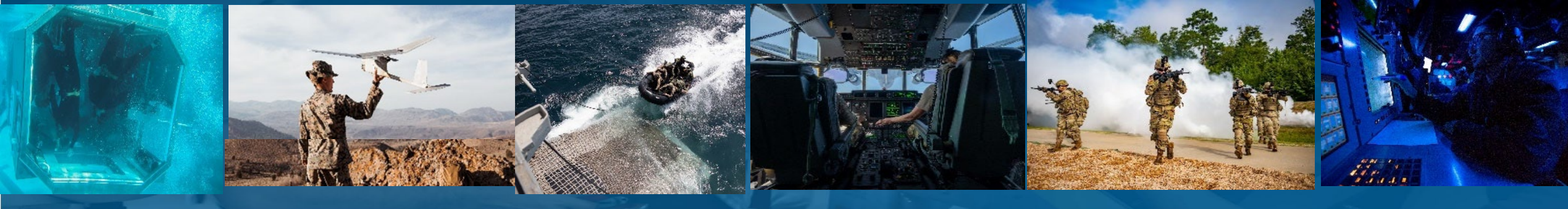
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DoD Human Systems S&T Strategy

- **PURPOSE:** Develop and deliver technologies to enable, sustain, enhance, and **quantify human and technology performance for measurably improved mission effectiveness.**



- Rapidly evolving technologies and human systems have the potential to both transform kinetic and non-kinetic conflict and revolutionize day-to-day U.S. supply chain and logistics operations. **Humans—Warfighters—play an intrinsic role in the application of rapidly evolving technologies, particularly artificial intelligence (AI) and autonomy.** Human data feeds and trains these technologies, humans modify AI actions, humans team with these technologies, and humans decide whether to use and trust even the most advanced and successful tools.



DoD Human Systems S&T Strategy

- **The HS S&T Enterprise** is focused on four focus areas:
 - Human-Machine Teaming / Systems Interfaces and Cognitive Processes
 - Personalized Education, Assessment, and Training
 - Protection, Sustainment, and Warfighter Performance
 - Operations in the Information Environment.
- **STRATEGY FOCUS:** The DoD HS S&T Strategy is based in part on the DoD Human Systems Community of Interest (HS Col) Roadmap. This strategy focuses on increasing military HS capabilities in the following terms:
 - Near: Enhancing capabilities for measuring warfighters' performance, managing readiness, and enhancing effectiveness in training and operational contexts
 - Mid: Expanding the ability of humans to perform within teams that include humans and/or machines
 - Far: Developing adaptive systems that can learn through interaction with human teammates and other machines to enable uniquely effective teams that are sensitive to individual differences, context, and change
- **DEVELOPMENT:** Previous Strategies were evaluated by the strategy team, including subject matter experts and each new iteration incorporated input from the following groups and input was adjudicated across multiple forums
 - HS Col Members (including Subarea groups)
 - Human Factors Engineering Technical Advisory Group (HFE TAG)
 - Joint HSI WG



Human Systems Col - Active Membership

STEERING COMMITTEE

Dr. Gaurav Sharma (AF)
Dr. Patrick Mason (Navy)
Dr. Christian Whitchurch (DIU)
Dr. Robb Wilcox (Army)
Ms. Lisa Sanders (SOCOM)*
CDR. Wilfred Wells (OUSD)
Dr. Jeremy Gaston (Army)
Dr. Thomas Davis (Army)
Dr. Scott Shadrack (Army)
Dr. John Kamp (DARPA)*

EXECUTIVE SECRETARIAT

Dr. Jill McQuade (AF)
Dr. Rich Hoffman (Army)
Ms. Rachel Weatherless (Army)
Dr. Jessie Chen (Army)
Dr. Glenn Gunzelmann (AF)
Dr. Mike LaFiandra (Navy)
Ms. Karen Gregorczyk (Army)

Members in **BOLD** are in attendance

Personalized Assessment, Education, and Training

Dr. Elizabeth Uhl (Army)
Dr. Ben Files (Army)
Dr. Greg Ruark (Army)
Dr. Anne Sinatra (Army)
Dr. Ben Goldberg (Army)
Dr. Kimberly Pollard (Army)
Dr. Pete Khooshabeh (Army)
Dr. Rich Hoffman (Army)
Dr. Laura Milham (ADL)
Dr. Karen Cooper (ADL)
CDR Pete Walker (Navy)
LCDR Jake Norris (Navy)
Dr. Mark Livingston (Navy)
Dr. Jim Pharmer (Navy)
Dr. Melissa Walwanis (Navy)
Dr. Jennifer Winner (AF)
Dr. Natalie Steinhauser (Navy)
Mr. Siddharth Maini (Navy)
Melissa Garmoe (AF)
Dr. Glenn Gunzelmann (AF)
MAJ Stephen Katrein (AF)
Dr. Megan Morris (AF)
Dr. Christopher Meyers (AF)
Mr. Thomas Rice (AF)
Dr. Christopher Stevens (AF)
Dr. Kendy Vierling (Navy)

Systems Interfaces and Cognitive Processes

Dr. Mark Draper (AF)
Dr. Laurie Fenstermacher (AF)
Dr. Jeff Palumbo (AF)
Mr. Ed Davis (AF)
Mr. Eric Hansen (AF)
Dr. Tom McKenna (Navy)
Dr. Jeff Morrison (Navy)
Dr. Rebecca Goolsby (Navy)
Dr. Katherine Cox (Army)
Dr. Caroline Mahoney (Army)
Dr. Jeff Hansberger (Army)
Dr. Edward Palazzolo (Army)
Dr. Lisa Troyer (Army)
Dr. Dale Russell (Navy)
Dr. Tammy Chelette (AF)
Dr. Vince Schmidt (AF)
Mr. Siddharth Maini (Navy)
Dr. Dave Scribner (Army)
Dr. Jessica Jones (Navy)
Dr. Chris Brill (AF)
Dr. Griffin Romigh (AF)
Dr. Aaron Rowen (Navy)
Dr. Dan Zelik (AF)
Dr. Joe Lyons (AF)
Dr. Gloria Calhoun (AF)
Dr. Amber Solomon (Army)
Dr. Deirdre Mahle (AF)
Dr. Greg Beister (AF)
Dr. Eric Vorm (Navy)
Dr. Chloe Callahan-Flintoft

Protection, Sustainment, and Warfighter Performance

Dr. Logan Williams (AF)
Dr. Peter Squire (Navy)
Ms. Karen Gregorczyk (Army)
Dr. Mike LaFiandra (Navy)
CDR Brennan Cox (SOCOM)
Dr. John Ramsay (Army)
LCDR Garrett Morgan (Navy)
Dr. Karl Van Orden (Navy)
Dr. Sandra Chapman (Navy)
Dr. Seth Faith (AF)
Dr. Brian Williams (Navy)
Dr. Karen Kelly (Navy)
Dr. Joel Bixler (AF)
Dr. Casey Pirnstill (AF)
Dr. Alex Kniffin (Navy)
Dr. Keith King (Navy)
Dr. Tim Bentley (Navy)
Dr. Jeff Schiffman (Army)
Dr. Erin Stomberg (Army)
Dr. Jason Foley (AF)



Human Systems Col Vision



Subareas

- **Personalized Assessment, Education, and Training:** Right Person, Right Job, and Right Team at the Right Time
- **System Interfaces and Cognitive Processes:** Effective, Natural Human-Machine Teaming
- **Protection, Sustainment, & Warfighter Performance:** Ensuring Warfighter Safety and Survivability



Human Systems Col Taxonomy/Mission

Sub-Areas	Mission	Current 2024 Thrusts
<p>Personalized Assessment, Education, and Training</p>	<p><u>Right Person, Right Job, and Right Team at the Right Time</u></p> <p>A readiness ecosystem to identify and develop knowledge, skills, competencies, and experiences to be mission ready for the 21st century operating environment</p>	<p>Personnel Selection and Assignment</p>
		<p>Instruction/Training Design, Assessment, and Readiness Monitoring</p>
		<p>Advanced Learning Technologies</p>
<p>System Interfaces and Cognitive Processes</p>	<p><u>Effective, Natural Human-Machine Teaming</u></p> <p>Warfighters teamed with agents and machines through intuitive, individualized, and adaptive interactions</p>	<p>Understanding Human/Cognitive Processing</p>
		<p>Human-Machine Interaction and Aiding</p>
		<p>System-Level Interfaces and Teaming</p>
<p>Protection, Sustainment, and Warfighter Performance</p>	<p><u>Ensuring Warfighter Safety and Survivability</u></p> <p>Enable superiority of Warfighters by understanding and overcoming operational stressors and providing protection from threats in their environment</p>	<p>Sensing, Monitoring, and Assessment</p>
		<p>Sustainment and Enhancement Technologies and Techniques</p>



Honorable Heidi Shyu's Transition Pathways

- Insertion of the technology into a DoD program (either a new start program or a program improvement plan)
- Software implemented on existing system
- Follow-on technology maturation program
- Transitioned to industry (defense or commercial)
- Transitioned to other Government Agency
- Fielding a new capability



Human Systems Col and NDIA Human Systems Division

- Opportunity for Industry and Federal Government to collaborate on research and development (R&D)
- Opportunity to leverage resources (e.g., people, laboratories)
- Provide “input” during writing of Requirements
- Better develop story of warfighting capabilities that Human Systems R&D delivers to DoD
- Better track flow of development of technology across industry, academia, and government; be able to tell full story of capability development from start to finish (e.g., Intel Inside)
- Feedback on value gained from participation in Col and NDIA HS Division interactions is welcomed, as are suggestions on what could make interactions more valuable



Current and Upcoming Opportunities

- SOCOM S&T Futures' Innovation Foundry 15 "Smart Cities – Future Challenges for SOF.": London, 16-19 April.
 - Design thinking workshop for SMEs from industry, academia, and government to collaborate with SOF operators to imagine the Smart City environment of 2035 and propose future concepts for addressing the challenges in this environment.
 - The announcement and application information can be found here: [IF15 2024: SOF Smart Cities Exploration in London \(sofwerx.org\)](https://www.sofwerx.org/IF15-2024-SOF-Smart-Cities-Exploration-in-London)
- BAA to be released late this year based on the following RFI: <https://www.grants.gov/search-results-detail/350730>
- AFRL Mid-Atlantic hub: <https://www.midatlantichub.afresearchlab.com/funding-opportunities>
- AFRL Midwest hub: <https://midwesthub.afresearchlab.com/funding/>

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Questions?

