Warfighter Performance: Integrating HSI into System Design

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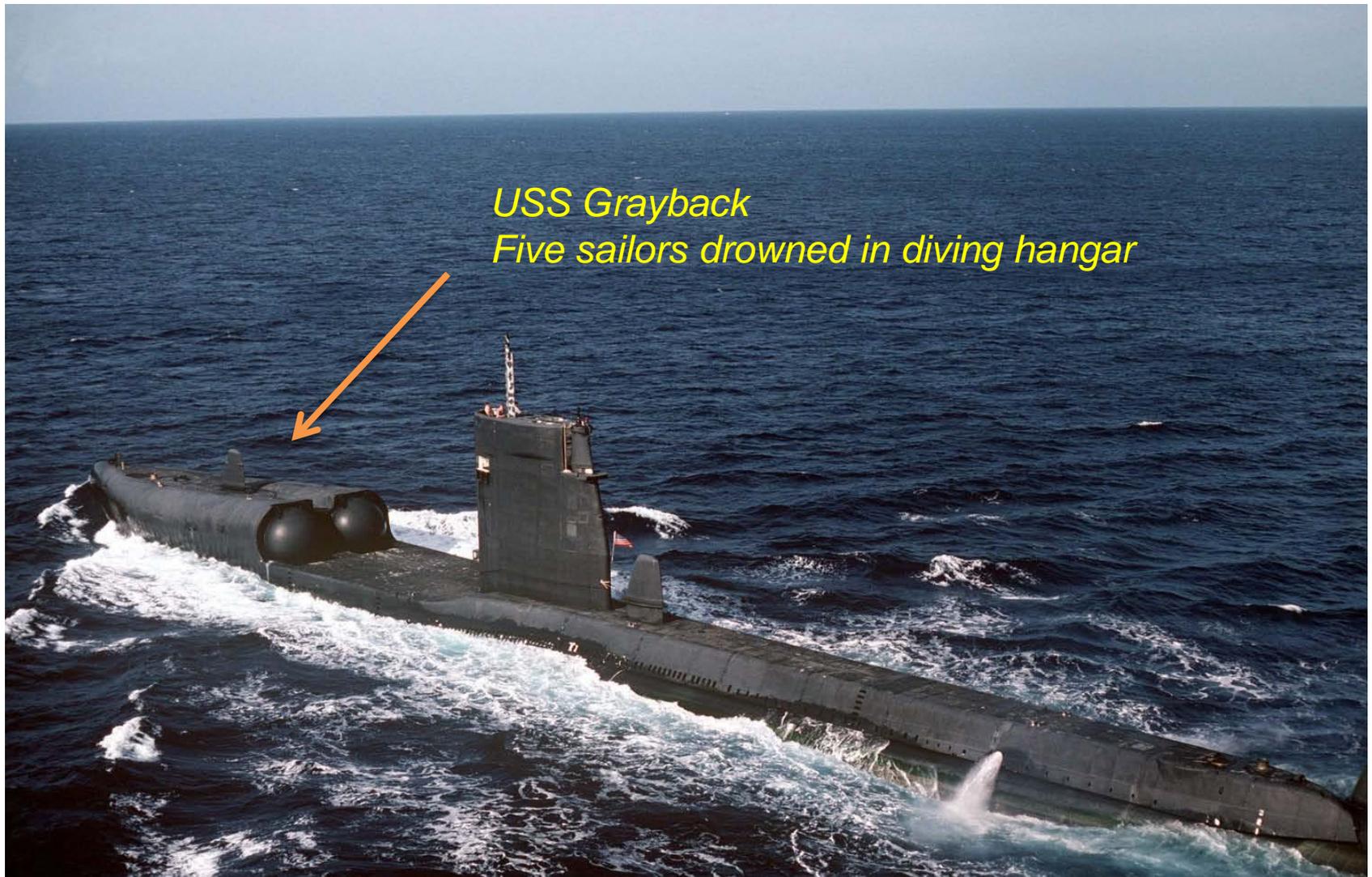# Seven Domains of HSI

Human Systems Integration

Human Engineering	Manpower	Personnel	Training	Safety And Health	Habitability	Personnel Survivability
Physical and Mental Caps & Lims	Wartime Rqmts	Personnel Classification & Selection	Training Concepts & Strategy	System Safety / Health Hazards Plan	Quality of Life	Anti-Fratricide
Anthro-pometrics & Biomedical Criteria	Deployment Considerations	Demographics	Task Analysis Methods	Human Error Analyses	Quality of Work	Personnel Protection
MMI	Force Structure	Accession Attrition & Retention Rates	Media / Equipment	System Reliability Analysis	Environment Limits and Controls	Perform Effects Of Ensembles
Mission/ Function/ Human Decision Making Rqmts Analyses/ Allocations	Operating Strength	Career Progression	Simulation and Replay	Lessons Learned	Personnel Services	Damage Control
Skill, Knowledge & Abilities	Manning Concepts	Training Flow	Objectives	Environmental Considerations	Ergonomics and Space Considerations	
Performance Assessments	Rank / Rate / Rating		Training System Evaluation	Protective Equipment	Personal Communication	
	Officer and Enlisted Workload		Training Development Plan			
			Performance Measurement and Feedback			

ENHANCE TOTAL SYSTEM PERFORMANCE WHILE REDUCING LIFE-CYCLE COST

HSI Impacts

USS Grayback
Five sailors drowned in diving hangar

Today: Engaging HSI

Congressional earmark to establish SEAPRINT

2005

2007

HSI Directorate included in Systems Engineering (NAVSEA 05)

2008

HSI incorporated into DoD Inst 5000.02

OPNAV INSTRUCTION 5310.23 on Navy Personnel HSI
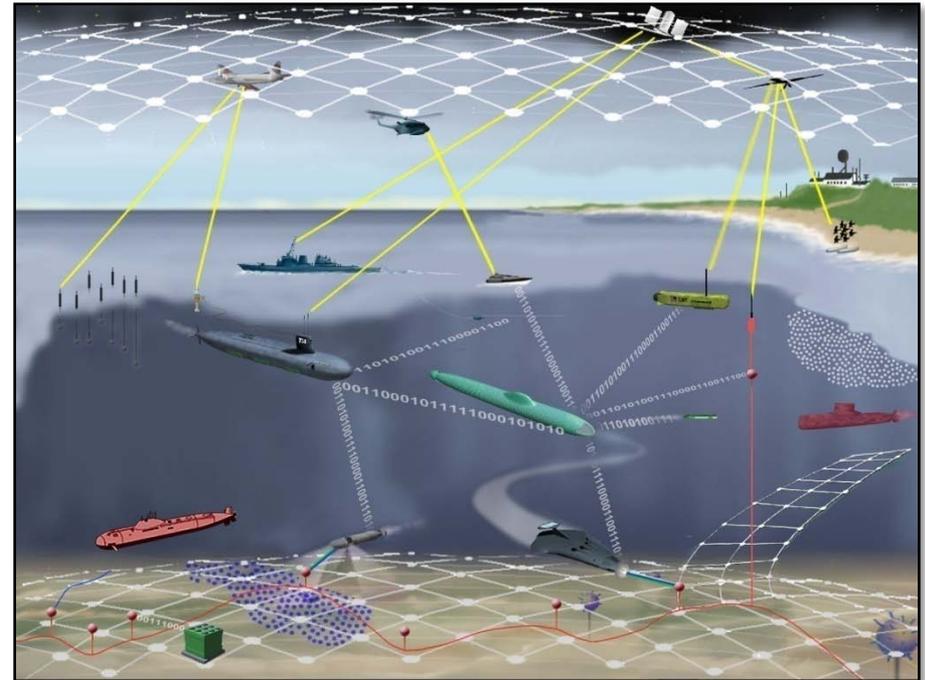
2009

2010

NAVSEA stands up HSI IPT
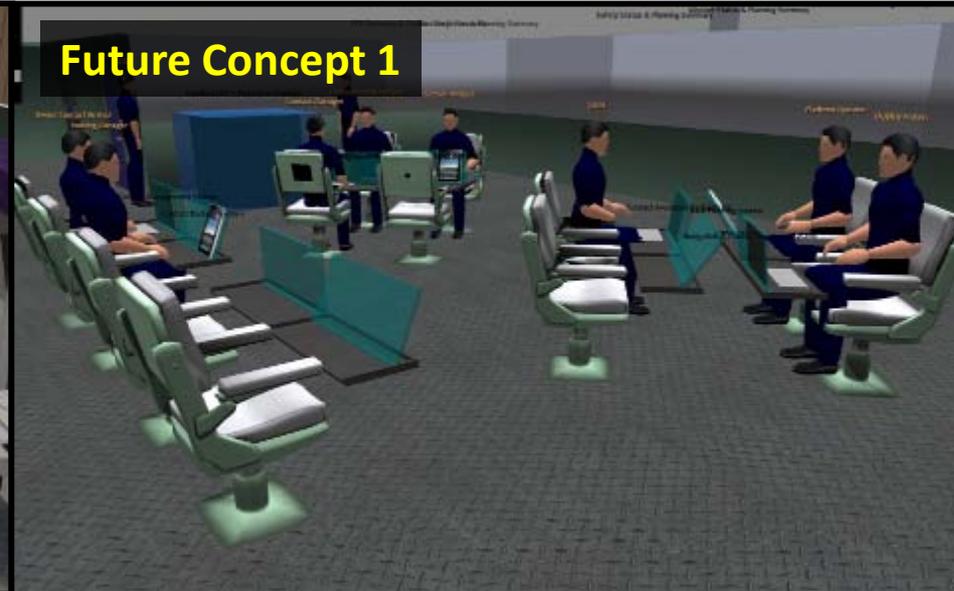
Changing Navy

Challenge for the Future

Supporting USW in the joint environment with the development of a scalable and flexible mix of sensors, platforms, and systems for now and the future

HSI in the Early Stages of Design

Virginia Block III

Future Concept 1

Future Concept 2

Human Comms

Enables Distributed Designers to Rapid Prototype in Real-Time