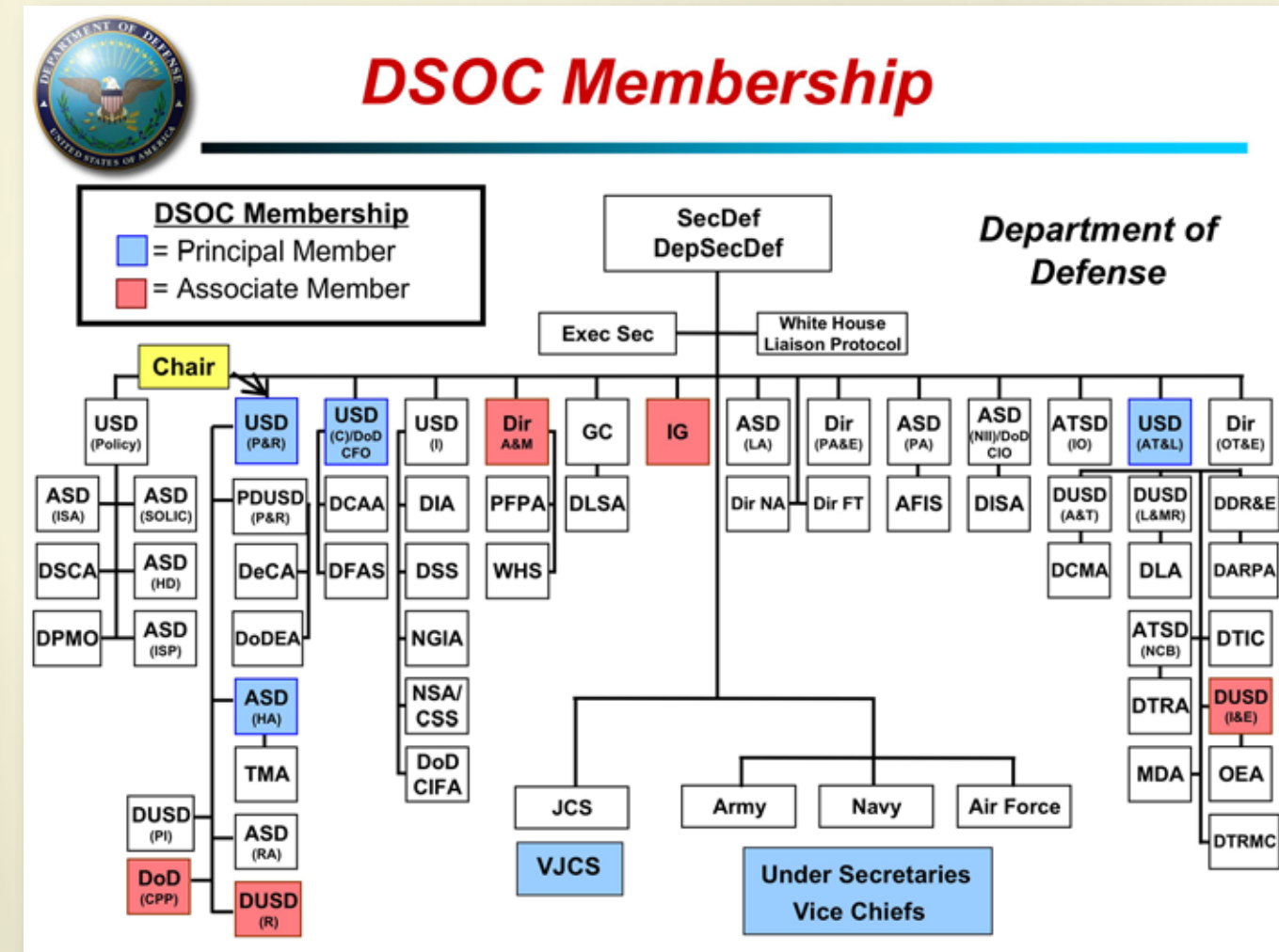


# An Overview of the Defense Safety Oversight Council's Occupational Health Initiatives

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## Background

The Defense Safety Oversight Council (DSOC) has funded safety & occupational health initiatives totaling approximately \$6 M/year since FY05. These initiatives are important for tri-service efforts to support the SECDEF 75% mishap reduction goal across DoD. These initiatives also support low cost mishap reduction projects with a high return. R&D type studies are not accepted.



### DSOC Governance Role

- Ensure personal involvement of the senior leadership
- Promote the 75% accident reduction effort to all levels of the military and civilian leadership
- Execute the specific initiatives to reduce accidents and time lost due to injuries
- Garner the resources to support the initiatives
- Manage progress toward goal
- Provide periodic updates to the Secretary

### DSOC Task Forces

- Acquisition and Technology Programs
- Aviation Safety Improvements
- Deployment and Operations
- Enterprise Data and Information
- Installation and Industrial Operations
- Military Training
- Private Motor Vehicle Accident Reduction
- Sports Injury Prevention
- Workers' Injury Compensation

## Objective and Methodology

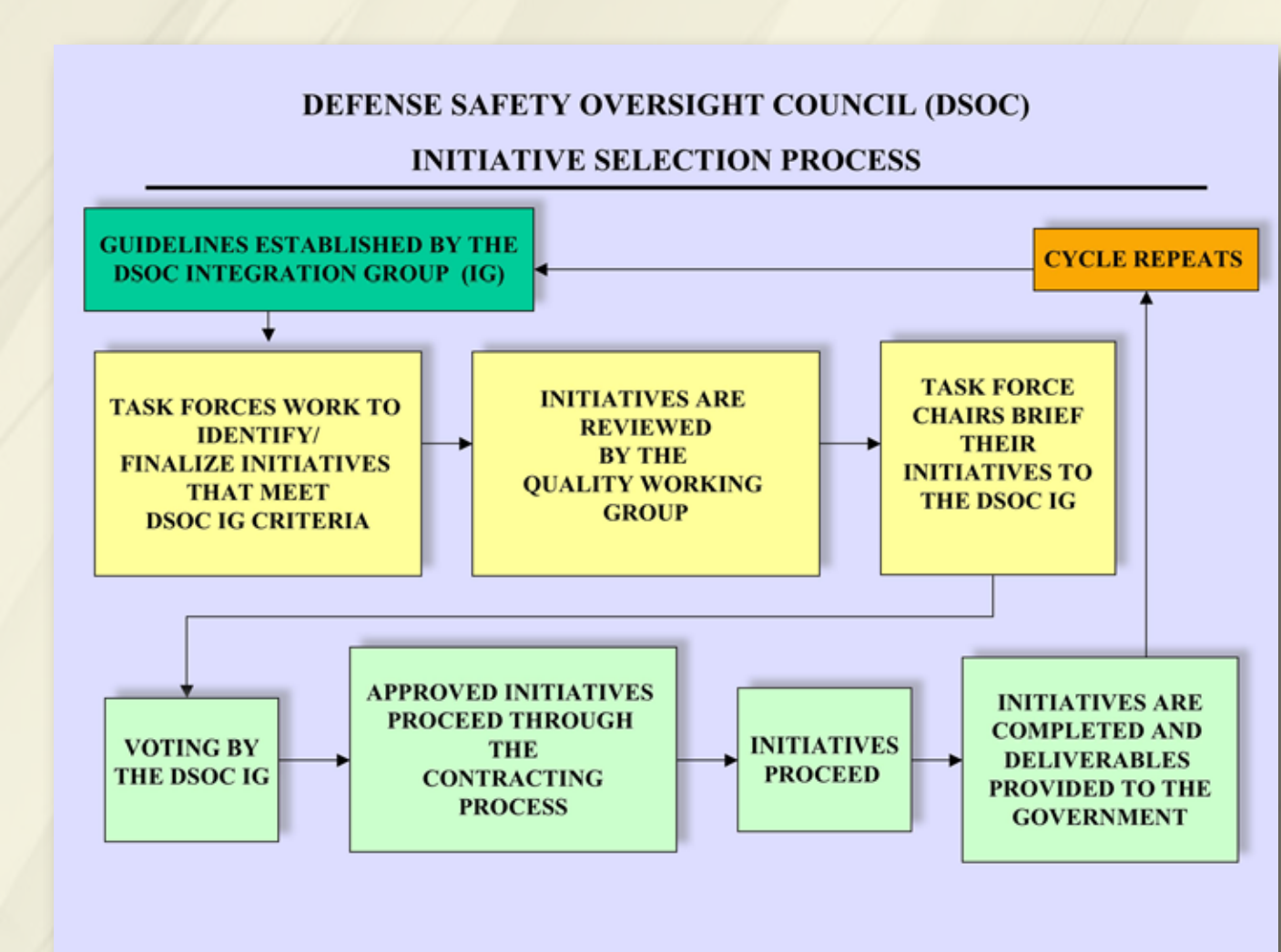
This project examines past DSOC initiatives, criteria and processes for acceptance of proposed initiatives, and recommends continued occupational health involvement for future initiatives.

### DSOC Initiatives

- Low cost mishap reduction proposals with high return on investment
- Recommended by the DSOC task forces
- Approved by the Deputy Secretary at August 2004 Senior Readiness Oversight Council (SROC)
- Funding provided in PBD 705

### Overall DSOC Initiative Guidance

- Provide "seed money" to initiate projects
  - Dem/Vol type of initiatives to kick start good ideas
  - Complementary to Service/Agency actions. Document with a transition plan
- Seek short term initiatives
  - Immediate measurable impact
  - Solid business case for implementation
- All O&M funding – restrictions apply
- Will likely use integrating contract
  - Consistent project management
  - Exceptions for compelling cases



## Results

Past DSOC funded initiatives are listed below and provide background information for obtaining interest for possible future occupational health related projects. Yellow highlighted projects may be of interest to occupational health/industrial hygiene professionals.

### 2005 DSOC Initiatives

Task Force	Initiative Name
ASI	<b>Mobile Driver Training</b> Designate AFSPIC as the Air Force's lead for beta testing of mobile driver training. Determine if this type of training is an effective DoD-wide tool for reducing vehicle mishaps.
ASI	<b>Slips, Trips &amp; Falls</b> Develop an initiative that will reduce slips, trips and falls (STF) within the DOD. This study focused on reducing STF during inclement weather using Commercial Off the Shelf (COTS) products.
ASI	<b>Small Bird Radar</b> Highly mobile, fully automated, self-contained radar systems capable of detecting real-time conflicts between wildlife and aircraft in the airfield or low level flight environment.
ATP	<b>Integrate ESOH into DAU</b> Ensure Acquisition Program personnel receive the necessary education and training to manage ESOH hazards and risks as elements of the program's systems engineering and risk management processes through the evaluation and incorporation of ESOH content into DAU curricula at a rate of approximately four major course revisions per fiscal year.
ATP	<b>Human Factors in Acquisition</b> Provide program and design engineers & reviewers with tools and metrics to evaluate the compatibility of tasks, processes, and designs with human performance capabilities that develop products and support operators to mechanical designs that increase injury risk.
ATP	<b>Black Box Tactical Vehicles</b> The objective of this task was to identify and test a device that was capable of providing drivers of the HMMWV, High Mobility Multi-Purpose Wheeled Vehicle, a visual and audible warning of potential rollover conditions. The Stability Dynamics, Inc. XALZ Rollover Alert Device was selected for the proof-of-concept and the results indicated that this device does demonstrate potential to warn drivers of developing rollover conditions.
D&O	<b>Common Data Elements for Safety</b> Implementation of the common safety data elements across the services safety center data collection and reporting systems.
EID	<b>Defense Safety Enterprise System</b> Establish an enterprise-wide Defense Safety Enterprise System (DESSES) that will serve as the DoD's single authoritative decision support system to provide actionable injury and mishap information on workforce and workloads to supervisors at all levels.
EID	<b>Ergonomics Computer/Web Training</b> Develop Web-based Training (WBT) as a means to help reduce the incidence of work-related musculoskeletal disorders and decrease worker's compensation costs, providing a general ergonomic awareness training (Ter 1), and an advanced training module (Ter 2). Ter 1 will also provide instruction necessary to conduct ergonomic site assessments, and to anticipate, recognize, evaluate and control ergonomic hazards. Integrate existing training material into comprehensive Ergonomics WBT that will be used to train all of the Services. The target audience for Ter 1 is all DoD personnel. The primary audience for Ter 2 is DoD Safety and Occupational Health (SOH) personnel.
IO	<b>Epidemiological Injury Analysis</b> Called Injury Data from existing DoD Databases and systematically prioritize DoD prevention and treatment efforts. The project consisted of a comparison of the support for the American Journal of Preventive Medicine (AJPM).
MT	<b>ASMSM2</b> The U.S. Army Combat Readiness Center (USARC) developed and tested the ASMSM-2 POV risk assessment software as a tool to reduce the number of Army POV fatalities. Planned as a pilot program to eventually incorporate other DoD users – USMC, USMC and USCO provided input to the initial Army design. DSOC funding through ASMSM-2 to all Services.
PMV	<b>Simulation Training (DBAT)</b> DBAT is intended to become a web-based tool to identify high risk drivers amongst 18-25 year old Service Members. The goal is to target intervention to a specific population segment identified as high risk through the DBAT and as a result make more efficient use of limited resources available to target at-risk driving behavior intervention.
PMV	<b>GPS Tracking System</b> Install GPS vehicle tracking and monitoring equipment in selected Service vehicles and establish if monitoring technology can influence a reduction in vehicle mishaps.

### 2006 DSOC Initiatives

Task Force	Initiative Name
MT	<b>Field Injury Tracking System (FITS)</b> Development, demonstration and implementation of a field injury tracking system and management system that provides key decision makers with systematic, real-time visibility of local hazards and illnesses.
D&O	<b>HMMWV HEAT</b> Evaluate HMMWV egress training situations.
D&O	<b>Safety Devices in Tactical Vehicles</b> Conduct a pilot test to determine applicability of sensor monitoring devices in theater or theater like conditions.
D&O	<b>OIF/OEF MEDEVAC Injury Training Analysis</b> Provide a foundation to establish an injury case-cohort medical evaluation database for USMC, Navy, and Air Force which will be based on the Injury Data Analysis Program, OIF/OEF MEDEVAC Injury Tracking System.
ASI	<b>On-line Joint (Climate) Service Safety Tool</b> Design, develop and demonstrate a comprehensive on-line joint service safety climate survey assessment tool that will provide a DoD-wide proactive intervention capability to reduce mishap potential based on predictive leading indicators and to assess safety culture across service lines.
ASI	<b>Mid-Air Collision Avoidance System (MACA)</b> Reduce mid-air collisions and close calls through rapid development and execution of a website linking civilian and DoD aviation safety programs.
ASI	<b>Maintenance Resource Management (MRM)</b> Leverage proven MRM concepts and training and adapt the current Air National Guard (ANG) MRM courseware for an Air Force wide application as a pilot-courseware package to determine if the courseware can be applied DoD-wide.
ATP	<b>Environmental Safety and Occupational Health (ESOH)</b> Programmatic Risk Tool (PRT) Modify the current programmatic risk tool employed by the Air Force to evaluate the acquisition program of up to two Army and two Navy program offices to be determined by the OSD ESOH IPT.
ATP	<b>General Noise Exposure Life Cycle Tool</b> Develop, demonstrate and evaluate a General Noise Exposure Life Cycle Tool to assist the acquisition community in building a business case for addressing noise induced hearing loss during the design/procure phase of development of major weapon system acquisitions.
ATP	<b>System Safety Metrics Method</b> Develop a system safety metrics method to reduce the visibility of system safety programs; provide a standard methodology for evaluating prospective system safety submissions; review the effectiveness of government programs and monitor program status through project completion.
ATP	<b>Advanced Safety Training Technologies – 3-D PMV</b> Deliver a media rich computer based training program on Motorcycle Safety that captures the learner through a visually stimulating 3-D environment, engaging story line, interactive decision points, logical consequences, audio and visual feedback.
PMV	<b>Advanced Safety Training Technologies – 3-D IO</b> Produce video that will inspire viewers to adopt safety as a "core personal value" and learn to proactively make safety choices for themselves as a reactive behavior. Train 100 participants at each of four sites.
IO	<b>Voluntary Protection Program (VPP) and Safety On-Line Safety Training</b> Develop a multi-media, web-enabled first level supervisor training course to assist supervisors in becoming more proficient in reorganizing supervisory safety responsibilities associated with implementing VPP and DoD sites.

### 2007 DSOC Initiatives

Task Force	Initiative Name
ASI	<b>Advisory Technology to Prevent Helicopter Controlled Flight Into Terrain</b> Militarize and demonstrate a GPS/COTS terrain and weather advisory system with a vertical obstruction database capability on H430 helicopters to reduce CFIT mishaps.
ASI	<b>On-line Joint Low-Level Route De-Confliction Tool</b> Adapt Federal Aviation Administration COTS 3-D program for preventing low-level mid-air collisions.
ASI	<b>Joint Maintenance Resource Management Courseware</b> Leverage USAF success to validate common mishap reduction strategy for MRM courseware via DoD-wide training.
ASI	<b>Joint Climate Safety Assessment Survey</b> Develop a web-based joint safety climate survey assessment tool for DoD-wide use to assess the impact of human factors and individual perceptions on organizational and cultural hazards and reach agreement on leading indicators that will become the foundation for a common tool to identify proactive intervention strategies to reduce mishap potential.
ATP	<b>Hand-Arm Vibration, Criteria for Tools &amp; Glove Selection</b> Perform hand tool analysis and provide procurement guidelines for power hand tools that will reduce personnel exposure to existing hand-arm vibration exposures while reducing noise exposures and promoting process efficiency.
ATP	<b>Development of Common Design and Evaluation Guidelines for the Access Aids (Ladders) for Military Vehicles and Shipboard Inclined Ladders</b> Mishap evaluation and identification and test deployment of alternative ladder technologies, including retractable ladders, for shipboard inclined ladders and tactical and non-tactical military vehicle access ladders for both retrofits and new systems.
ATP	<b>Web-based Hazard Analysis risk assessment software tool</b> Develop a web-based software tool to be used by acquisition analysts to perform hazard analysis for military DOD programs.
ATP	<b>Training Model for Incidental Drivers</b> Evaluate best drivers training model for drivers training as part of a broad approach to reduce tactical vehicle mishaps for the DoD.
D&O	<b>Safety Devices in Tactical Vehicles</b> Test Proof of Concept for reducing tactical vehicle accidents by installing COTS safety devices.
IO	<b>Demo of Sensor Monitoring System for Materials Handling Equipment</b> Test proof of concept for reducing health and other material handling equipment (MHE) accidents by installing a COTS sensor monitoring system.
IO	<b>Flightliner Injury Initiative</b> Reduce flightliner mishaps by providing web-based training that focuses on flightliner unique occupational hazards.
IO	<b>Ankle Brace for Ground Operations</b> Demonstrate and evaluate of ankle braces and in-the-foot braces as options for providing ankle support and reducing injuries in operational units.
MT	<b>Technology-Based Basic Combat Training Overturn Injury Prevention</b> Provide professional expertise and technical assistance to develop and assess a web-based intervention program for the reduction of injuries related to basic combat training (BCT).
MT	<b>Causes and Risk Factors for Military and Privately Owned Vehicle Accidents (Joint PMV TF Initiative)</b> Determine the leading risk factors for military and privately owned vehicle (POV) accidents by data collection and analysis.
MT	<b>Identify Work-Related Fall Prevention Measures</b> Identify and assess current industry workplace fall prevention technologies and analyze existing government programs and develop recommended approach DoD-wide "next steps" for fall prevention that will assist DoD policy makers establish effective programs.
MT	<b>Statistical Models for Predicting Negative Training Outcomes in Basic Combat Training</b> Demonstrate and validate a statistical model in a demonstration/validation test for the US Army.
MT	<b>Sports Injury Surveillance</b> Develop surveillance systems at the service academies to evaluate the risks associated with sports activities in order to provide baseline data, identify unnecessary risks and develop effective injury reduction strategies and provide actionable data to commanders.
MT	<b>Develop Appropriate Interventions for High Risk Drivers Identified by DBAT</b> Create an internet receive survey of high risk drivers to assess and conduct individualized self-assessment profile testing areas of concern. Develop recommended training interventions based on the individual profile in the areas of self-assessment, training, and education.
PMV	<b>Driver Record Monitoring</b> Implement process to provide commanders with leading indicators via monthly web-based reports of off-base driving violations, suspensions, and revocations, which will help identify service members who consistently engage in risky driving behavior.
PMV	<b>Flight Data Management</b> Conduct a Demo/Proof of Concept flight training system (ALERTS) at Fort Rucker to provide an assessment of the potential of this technology for ADECOM/FOQA solutions to enhance safety and training effectiveness for all of Army Aviation's legacy fleets.
OTHER	<b>DoD Injury Prevention Awareness</b> Develop a series of Sports and Recreational Injury Prevention (SRIP) Public Service Announcements (PSA) through Pentagon Public Affairs to be distributed across DoD using existing distributor resources.

### Multi-Year DoD Initiative

#### Genesis of DoD VPP CX

- Secretary of Defense 75% by 2008 mishap reduction goal
- Sponsored by Installation and Industrial Operations Task Force
- Department of Defense Voluntary Protection Program Center of Excellence (DoD VPP CX) established September 2005
- Mission: Assist U.S. Department of Defense (DoD) Installation Commanders and Activity Directors in achieving Occupational Safety and Health Administration (OSHA) Voluntary Protection Programs (VPP) Star status.

### Multi-Year DoD Initiative

#### DoD VPP CX Highlights

- Engaged and assessed 100 installations/activities by the end of FY 08 (CONUS and OCONUS)
- 2 sites completed OSHA on-site visit and recommended for Star status
- Developed web-based eVPP tool for sites/ Commands to track VPP implementation progress/status
- Conducted three workshops preceding Voluntary Protection Program Participants Association national or chapter events
- Broadcast monthly webinars on VPP related topics for DoD installations/activities

## Discussion and Conclusion

Thirty-eight percent of previously funded initiatives relate to occupational health and industrial hygiene disciplines.

Some of the previous initiatives of interest to the occupational health community are:

- Develop hand-arm vibration criteria for power hand tools and for glove selection.
- Develop a general noise exposure life cycle tool to assist the acquisition community. (Identify projected cost of noise-induced hearing loss and avoided cost from noise controls)
- Provide tools and metrics to evaluate the compatibility of tasks, processes and designs with human performance capabilities. (Apply ergonomics to design)
- Develop a web-based hazard analysis & risk assessment software tool.

## Recommendation

The occupational health community should submit recommendations for out-year initiatives, which can further the knowledge and prevention of Navy occupational disease and injury. The point of contact is CDR Linda Byrnes, telephone 703-602-2574, email Linda.Byrnes@navy.mil.

Category: Informational Poster

Discipline: Occupational Health, Industrial Hygiene

Sub-Discipline: Management Systems, Injury Prevention and Education