

The Safety and Occupational Health (SOH) Challenge in Acquisition

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Background

The misperception of SOH, by some within the acquisition community, is a challenge facing SOH professionals. Effective SOH in design utilizes a systems engineering approach to integrate human capabilities and limitations into the design of acquisitions to minimize the potential for injuries/illnesses while maximizing performance.

Objective and Methodology

This project evaluates occupational health information from the Navy Acquisition Safety website and analyzes some reasons why SOH is not better integrated into the acquisition process.

U.S. Navy Approach

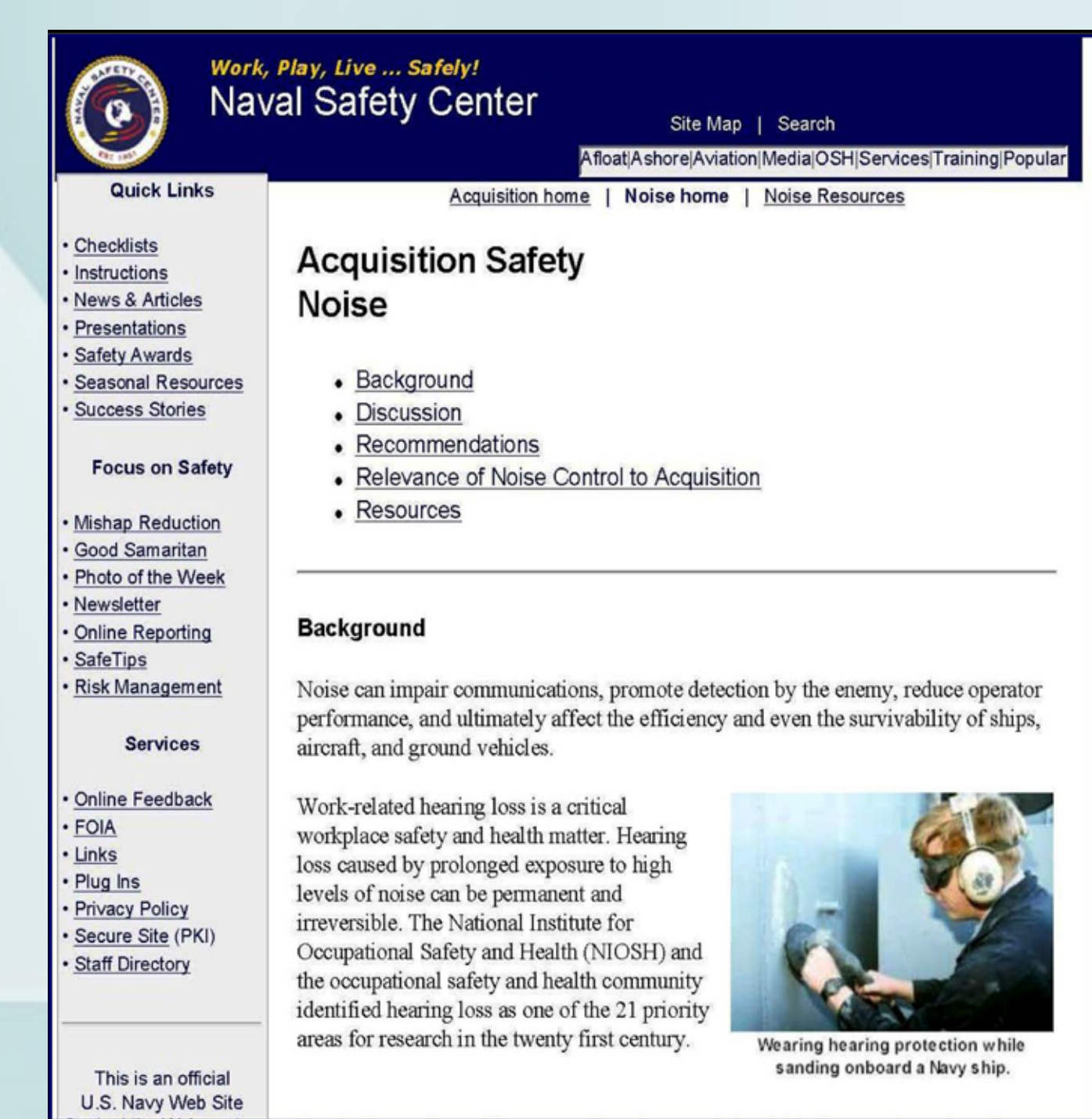
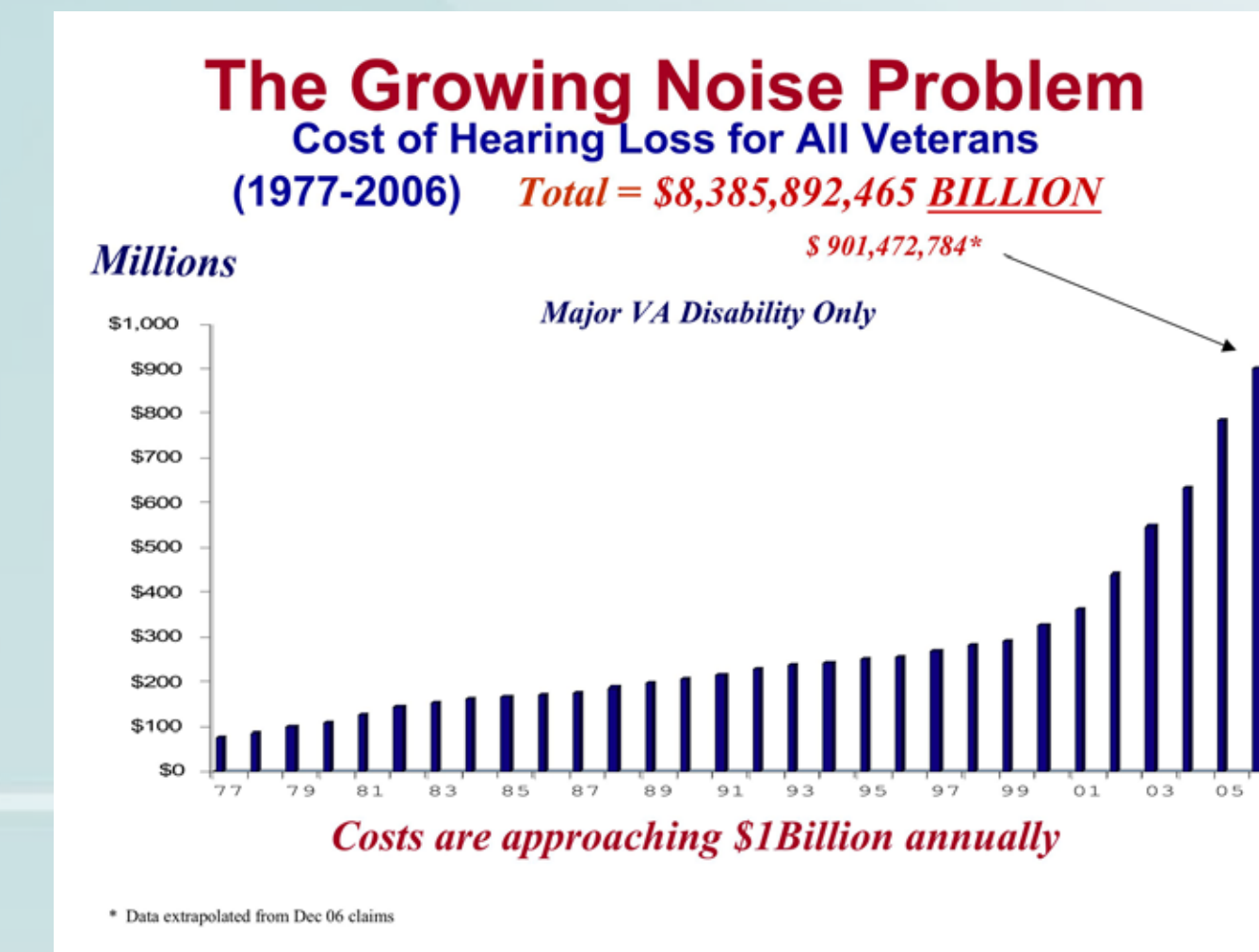
Acquisition Safety (including Industrial Hygiene) website
<http://www.safetycenter.navy.mil/acquisition/default.htm>

- x Noise
- x Vibration
- Ergonomics/Human Factors Engineering
- Fall Protection
- Confined Space Entry
- x Ventilation
- Heat Stress
- Radar
- System Safety
- Nanotechnology – Coming soon
- Electrical – Coming soon



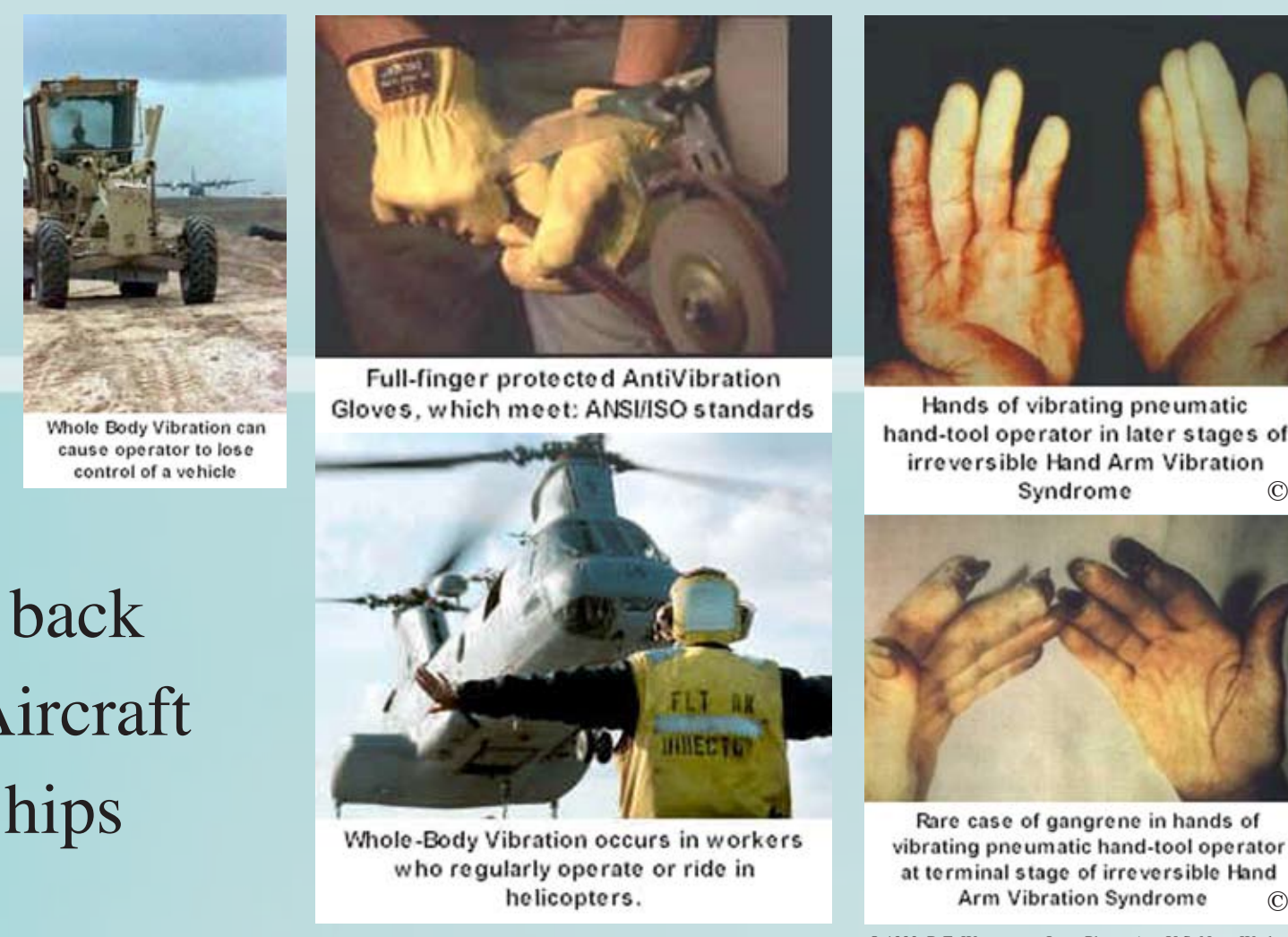
Noise – Why?

- Navy Hearing Loss to Vets is over \$150M/ yr
- Negative impact to health
- Impact to readiness if can't hear important information



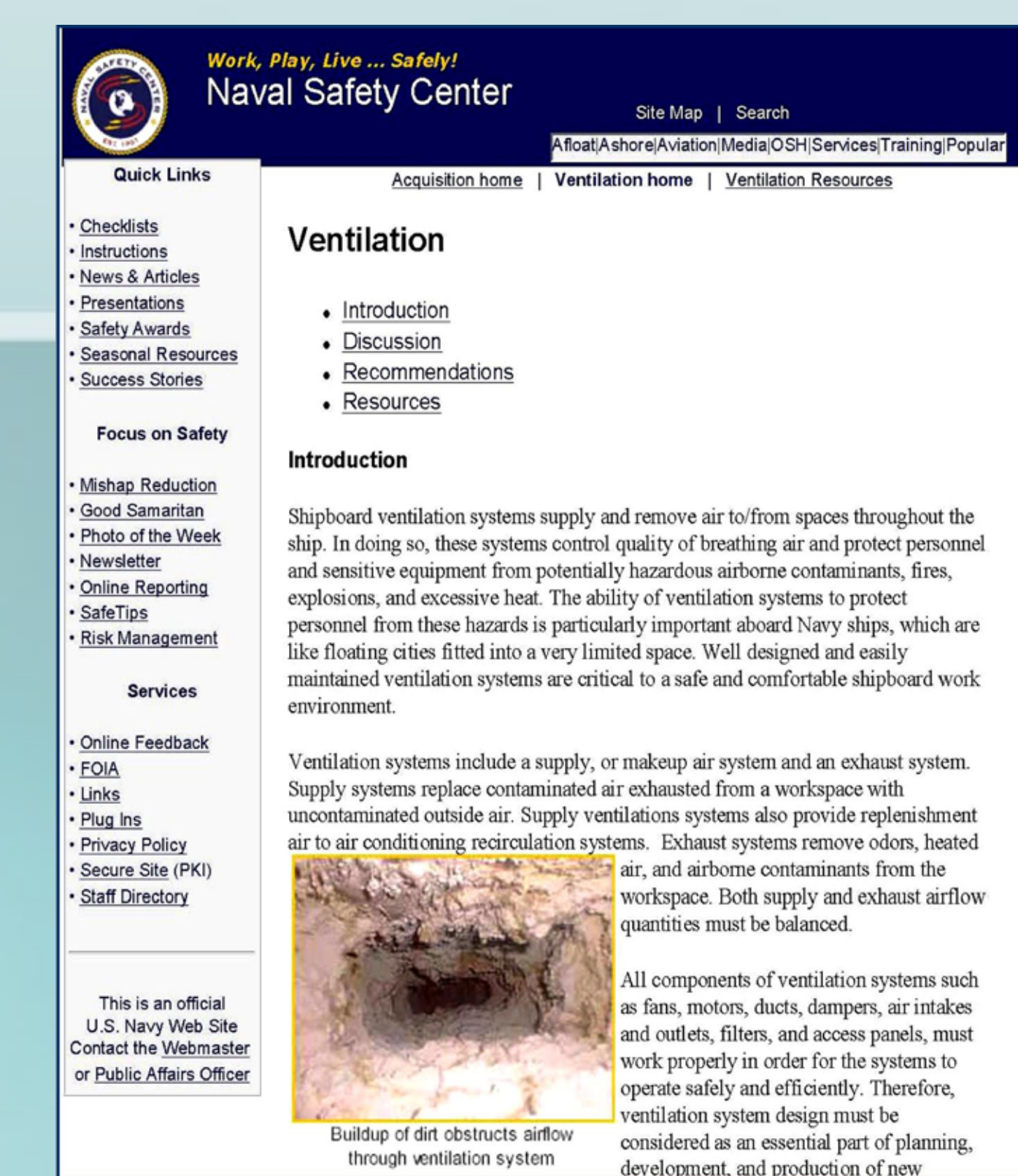
Vibration – Why?

- Hand Arm Vibration
 - Causes Hand Arm Vibration Syndrome
 - Hand Tools
- Whole Body Vibration
 - Concentrates in lower back
 - Trucks - Aircraft
 - Forklifts - Ships
 - Hovercraft



Ventilation Design– WHY?

- Clean, breathable air is a necessity to human life
- Clean air on ships/subs is not always optimal:
 - Construction: Grinding, painting, sanding, welding, etc.
 - Ship Use: Laundries, galleys, hazardous material storerooms, ventilation maintenance
 - Ship Dismantlement: Cutting, sawing, grinding, etc.



Some reasons why SOH is not better integrated into the acquisition process:

Safety Myth: Safety doesn't require advance planning

Reality: Disaster can strike quickly, sometimes without warning. Anticipating emergencies and planning a safe response can significantly reduce injuries and limit damage to equipment and property.



Safety Myth: Wearing hearing protection is an impediment

Reality: An individual exposed to noise doesn't get used to the exposure. The loss of hearing simply increases the threshold of hearing perception, distorts clarity of communications. Hearing loss continues as exposure is sustained. Because little if any pain is felt with hearing loss, many individuals aren't aware of hearing loss until it is too late.



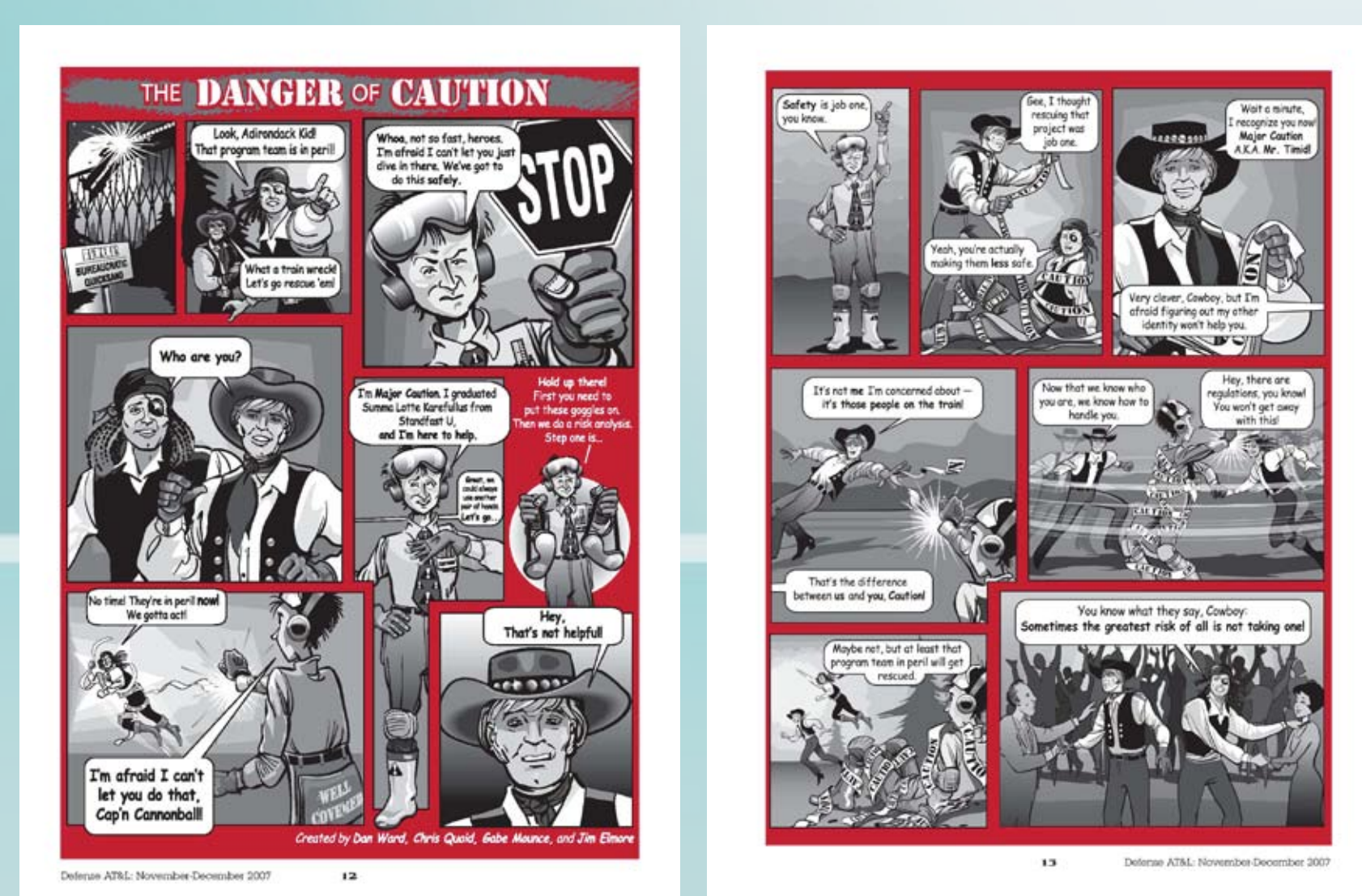
Safety Myth: Safety in design is too expensive

Reality: Effective acquisition safety increases productivity through streamlined work processes and avoidance of fatalities, injuries, and illnesses. It saves a significant amount of money by avoiding expensive retrofits due to poor design, disability and retraining costs, and lost productivity.



Safety Myth: Safety prevents the timely completion of tasks

Reality: Evaluating hazards and implementing control measures results in more effective and timely completion of tasks because occupational injuries and associated "down time" are avoided



Safety Myth: Safety impedes efficiency or is a "necessary evil" obtained at the cost of optimal efficiency

Reality: In fact, efficiency and safety generally correlate. Operations that are evaluated for risk also tend to improve safety and reduce waste.



Results

SOH guidance on the Acquisition Safety website includes: Noise, Vibration, Ventilation, Heat Stress and Ergonomics. Some common myths identified and refuted are: SOH in design is too expensive; safety impedes efficiency and prevents timely completion of tasks; wearing hearing protection or other protective gear is an impediment; safety doesn't require advance planning; and excessive attention to safety impedes operational readiness.

Conclusion

The SOH community should assist with changing attitudes within the acquisition community.



Acquisition Safety

Protecting our people is critical to our mission of national defense. We are dedicated to ensuring our Sailors and Marines are ready at all times to carry out their mission by providing them with safe and healthful work environments. One place to start is in acquisition. The point of contact is Joy Erdman, telephone 703-602-2575, e-mail Joy.erdman@navy.mil

Recommendations

- The SOH community should learn more about acquisition.
- The Defense Acquisition University free on-line Acquisition 101 course is obtained from the Navy Acquisition Safety website (including the link to Defense Acquisition University training at): <http://www.safetycenter.navy.mil/acquisition/default.htm>
- SOH professionals should learn more about occupational health/industrial hygiene in design. A good place to start is the Navy Acquisition Safety Website Executive Summary. http://www.safetycenter.navy.mil/acquisition/executive_overview/Acquisition_Safety_Executive_Overview.pdf

Category: Informational Poster
Discipline: Occupational Health, Industrial Hygiene
Sub-Discipline: Risk Communication, Engineering Controls