

COST/TIME SAVINGS

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ACTIVITY	CHALLENGE	IMPROVEMENT	COST SAVINGS	TIME/LABOR SAVINGS
<p>DDG 1000 program - NAVSEA</p>	<p>Identification of human systems integration issues early on in design process.</p> 	<p>Concept of operations exercises,” or COOPEXs, allow Sailors to participate in low fidelity prototype usability walkthroughs of ship and system designs to get early user inputs and to evaluate the design.</p>	<p>Cost avoidance for redesign and rework on the bridge layout and design alone is estimated at about \$22 million.</p>	<p>Reduced technical and schedule risk, reduced acquisition cost, and cost avoidance of rework to correct post initial operating capability fleet issues.</p>
<p>Military Sealift Command Lockout/Tagout Program</p>	<p>Power from electricity, hydraulics, compressed air, steam and coiled springs pose risk of injury to workers and damage to property.</p> 	<p>MSC established its highly successful Lockout/Tagout Program to allow workers to physically lock out machinery and equipment prior to servicing them.</p>	<p>Since January 1997, MSC civil service manned vessels have implemented the Lockout/Tagout Program. Annual savings now exceed \$1.1 Million.</p>	<p>Through Calendar Year 2010, approximately \$14 Million has been saved in labor costs.</p>
<p>Naval Hospital Dental Clinic Rota Spain</p>	<p>Prolonged awkward postures, static positions.</p> 	<p>Dentist and dental assistant chairs that promoted staff member mobility and patient access; and that accommodated different body sizes.</p>	<p>Reduced risk of WMSDs of the neck, back, and shoulders with resulting workers' compensation costs.</p>	<p>Return on investment of over 200% if one lost time back, shoulder, or neck WMSD injury is avoided.</p>
<p>ACU-4 Little Creek, VA</p>	<p>Prolonged awkward postures, extended reaches overhead.</p> 	<p>Design of height-adjustable, rotating mobile propeller fixture for transporting LCAC propellers and working on them in the Propeller Shop.</p>	<p>Reduced risk of WMSDs of the neck, back, arms, and shoulders with resulting workers' compensation costs.</p>	<p>Return on investment of 223 days based on improvements in productivity and the statistical probability of avoidance of at least one work-related injury or WMSD.</p>

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COMNAVREG San Diego, CA	Awkward postures, extended reaches, heavy lifting 	Redesigned work stations, sit/stand stools, scissor lift tables	Reduced risk of WMSDs of the neck, back, arms, and shoulders with resulting workers' compensation costs.	\$41,433.00 every year for a return on investment in 519 days, or approximately one year and five months.
SWRMC San Diego, CA	Awkward postures, lifting overhead, prolonged standing in Sail Shop 	Larger work stations, ergonomic seating, automated storage rack, adjustable frame for sail webbing tasks	Reduced risk of WMSDs of the neck, back, arms, and shoulders with resulting workers' compensation costs.	Fabrication, storage, and retrieval task time savings. Yearly potential injury aversion and productivity cost savings are estimated to be \$306,500.00
PNSY Kittery, ME	Drydock fall protection perimeter in need of update 	Installed new guardrail system that is safer and easier to install and maintain than old post and chain system	Cost saving for manufacturing and installation was about 25%	Decrease in costs over operating/maintaining outdated system expected to be over 50%. Maintenance cost savings now equal over \$10,000/year
NMC San Diego, CA	Lifting over shoulder height in pharmacy lotion compounding station 	Hydraulic scissors lift table adjusts to height of technician	\$149,000 over ten-year life cycle of table	Increased efficiency and decreased downtime by reducing incidence of WMSDs among pharmacy technicians
NAS JRB, Willow Grove, PA	Deteriorated local exhaust ventilation in spray paint booth. 	Removal of paint residues from fans and ductwork. Establishment of formal preventive maintenance plan.	Extended life of paint-spray booth's local exhaust ventilation system. Reduced time ground support equipment out of service.	Decreased time required to remove corrosion and to repaint ground support equipment.
NASNI, San Diego, CA	Repairing number 3 doors on FA-18 aircraft using hand held power tools. 	Fixture to hold door in place and allow partial rotation and reduced-vibration powered hand tools.	\$181,300 over ten years	Reduced time to repair door from 15 to 11 days.

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Public Works Center, Philadelphia, PA	Paint spray booth needed updated ventilation system. 	New exhaust system, improved lighting, installation of pressure gauge.	Avoidance of exposure to airborne mists, vapors, and fumes from paints and solvents with resulting workers' compensation costs.	Time to complete spray painting tasks cut in half.
SIMA San Diego, CA	Manual transporting of heavy, awkward portable welding equipment 	Developed fixture that increases maneuverability and distributes the load between two people.	Reduced risk of injuries and WMSDs of the back, arms, and shoulders with resulting workers' compensation costs.	Decreased time to and from jobsites. Decreased time needed to recover from fatigue before starting welding tasks. Increased welding efficiency.
Naval Hospital, NAS Rota, Spain	Streamline cataloging of hazardous materials. 	Industrial hygienists use cross-referenced databases to assess health risks associated with HM.	Avoidance of future HM exposure and injury with resulting workers' compensation costs.	Industrial hygienists complete HM risk assessments more rapidly and are available to spend time on other services.
PWC San Diego, CA	Accessing roll-offs and redistributing HW 	Remote control <i>hazardous waste rake</i> attached to forklift	\$5,200.00 to \$8,800.00 annually per facility	Reduction in time from 15 to 20 minutes to 2 to 3 minutes per HW redistribution
SIMA, Coronado, CA	Grinding with heavy, awkward, strongly vibrating conventional grinder 	Substitution of pneumatic grinder.	Decreased risk of irreversible HAVS and carpal tunnel syndrome with resulting workers' compensation costs	Time to complete repair projects reduced by 25%

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NADEP, Jacksonville FL	Repairing flapwells on Patrol aircraft using hand held power tools 	Fixture to hold flapwell in place at comfortable level for performing corrosion control	Decreased risk of work-related musculoskeletal disorders with resultant workers' compensation costs	Reduced time for corrosion control by 50%
Branch Medical Clinic, Pearl Harbor, HI	Muskuloskeletal injuries account for 42% of all medical releases of active duty Navy members. 	Sports Medicine and Rehabilitation Therapy (SMART) Centers committed to return to readiness programs	Return to active duty in timely manner. Avoidance of future injuries through education.	Since opening in July2002 successfully returned 78% of patients to active duty status within 30 days of visit to SMART vice prior 90 day process
NNSY, Norfolk, VA	Manually pulling electrical cable weighing 7 lbs/linear ft 	Mechanically assisted cable pulling process	Decreased risk of injuries. Cost reduction up to 50%; combined savings over \$118,000.00.	Labor reduction from 30 - 70 workers to 7 - 12 workers per cable pull
PWC, San Diego, CA	Manually pulling heavy tarps over dump truck beds 	Automatic system for covering truck beds	Decreased injuries and cumulative trauma disorders. Direct savings of \$74,970.00 annually	Increased productivity from 25 minutes/truck to 10 minutes/truck
Various	Mobile cranes collapse when load limit exceeded 	Load Moment Indicators or Load Indicating Devices installed on 132 mobile cranes at 28 locations	Avoidance of serious injuries and destruction of millions of dollars worth of equipment and materials	Decreased downtime by reducing the number of crane-related mishaps and personnel injuries

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PWC, San Diego, CA	Manual cable cleaning and lubrication 	Automated cable lubrication system	Reduced annual cable cleaning costs by 89%, from about \$320,000.00 to about \$34,000.00	Increased efficiency and decreased downtime by reducing incidence of hand injuries among cable cleaners
NUWC, Newport, RI	Manually transferring towed array test cable reels weighing up to 7,000 lbs. 	Mechanical cable reel handler	Avoided approximately \$67,500.00 annually on about 225 reels/ year	Labor reduction from of 4 - 6 workers to 1 worker to transfer a cable reel, increasing efficiency and reducing risk of injuries
NADEP, North Island, CA	Vibration from rivet guns exposed workers to serious risk of hand-arm vibration syndrome 	Remote control device reduces transmission of rivet gun vibration to user's hands, arms, and upper body	Reduced annual costs of F/A-18 maintenance by about \$29,669.00	Eliminated risk of work-related vibration injuries and reduced turn around time on F/A-18 aircraft by 20 hours/unit
SIMA, Norfolk, VA	Off-site training of new forklift operators and periodically re-qualifying experienced operators 	Developed in-house forklift operator training classes	Estimated annual direct cost avoidance of \$50,600.00	Decreased downtime by eliminating need to send forklift operators off-site for periodic forklift training
NFESC, Port Hueneme, CA	OSHA ventilation requirements for spray-paint operations costly and impractical for corrosion control and paint hangars 	Obtained revised OSHA local exhaust ventilation requirements for corrosion control and paint hangars	Initial cost savings of about \$250,000.00 per new hangar and life cycle cost avoidance of another \$250,000.00 per hangar	Improved protection of aircraft maintenance workers from fire and explosions and from inhalation hazards during aircraft maintenance operations

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<p>IH Dept., NH, Rota, Spain</p>	<p>Numerous respiratory illnesses and allergic reactions reported by workers in an office building. Indoor air quality investigation revealed fungus contamination in building's air handling system.</p> 	<p>Navy microbiologist identified fungal contaminants and recommended method for decontaminating building's air handling system and for preventing recontamination</p>	<p>Navy experts resolved indoor air quality incident, avoiding about \$9,000.00 in cost to bring consultants from U. S. to identify air contaminants and resolve this incident</p>	<p>Downtime and medical evaluation due to respiratory illnesses and allergic reactions. Building returned to normal levels after building decontaminated</p>