

VOLPE HIGHLIGHTS

Volpe Center Alcohol Countermeasures Program Developing International Standards

The Volpe Center's long and distinguished list of accomplishments in alcohol countermeasures and transportation has given it a nationally-recognized leadership position in the field. Since its founding in 1970, the Center's Alcohol Countermeasures Support program has been continually assisting the National Highway Traffic Safety Administration (NHTSA) as well as other sponsors such as the Office of the Secretary of Transportation and the Federal Transit Administration in designing and developing devices and programs that can accurately detect the presence of alcohol in transportation drivers and operators.



Volpe Center experts Dr. Art Flores and Ed Conde with a breath alcohol testing device in the Volpe Center's Alcohol Countermeasures Lab.

One of the program's major current activities is participating in the International Organization of Legal Metrology (OIML). Volpe's staff is part of the OIML working group that is drafting recommended international standardized procedures for evaluating breath alcohol testing and screening devices, or EBTs. Other activities -- many of which take place in the Alcohol Countermeasures Lab at the Volpe Center -- include developing specifications for and testing EBTs and calibration units and testing submitted breath test samples.

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White House Designates Volpe "Commuter Choice Survey" as Best Practice for Federal Agencies



The Volpe Center Commuter Choice Survey found that 52% of staff utilized public transit to commute to work.

The White House Council on Environmental Quality (CEQ) recently distributed the Volpe Center's "Commuter Choice Survey" to all Federal agencies as the "best resource that is currently available" to estimate greenhouse gas emissions attributable to commuter travel by Federal employees. The survey was developed by the Volpe Center's Green Team, which works to integrate environmental sustainability considerations in the facility planning process at the Volpe campus.

The survey originated from the need for data on the Center's commuting population to support an application for Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council. The Green Team designed and implemented an innovative survey for the nearly six hundred Federal employees of the Volpe Center. Results from the survey revealed that respondents opt for alternative commuting for the majority of their trips and that commuting flexibility (flexible arrival/departure times, telework, and compressed-work-week options) strongly contributes to positive worker satisfaction.

The survey gathers information on an entire week of commuting activity from each respondent, and includes questions on demographics, sustainability, and the psychological aspects of commuting. The survey supports the requirements of an [Executive Order](#) that mandates that Federal facilities evaluate opportunities to reduce greenhouse gas emissions from employee commuting. Following a high-level Federal review process, a revised version of the Volpe Center survey was released to Federal agencies as a model practice.

National Park Service Partners with Volpe Center on Alternative Transportation Study at Cape Hatteras National Seashore

The National Park Service (NPS) has partnered with the Volpe Center to perform an analysis of transportation strategies for visitors traveling from and destined for sites within the Bodie Island District at the Cape Hatteras National Seashore. The study is being funded by a planning grant awarded to NPS by the Federal Transit Administration's Paul S. Sarbanes Transit in the Parks (TRIP) Program. The Volpe Center has extensive experience working with NPS and other public land agencies on TRIP projects and this study is one of a several projects that are being conducted for a new sponsor, the Southeast Region of NPS.

The study's analysis has focused on the potential use of transportation services and non-motorized vehicle options, such as shuttle, local bus, and water ferry services and connections for bicyclists and pedestrians, as well as associated services, equipment, facilities, and infrastructure. The study analyzes the movement of visitors within developed areas of Bodie Island, especially in the context of increased visitation to the Bodie Island Lighthouse, but does not include transportation of visitors along the beach or to Bodie Island Spit. Planning-level recommendations and estimates are provided to inform future decision-making, but is not a decision document.

Throughout July and August, the NPS solicited input on proposed alternative transportation strategies developed for Bodie Island as part of the study. Volpe Center staff member Lindsey Morse of the Advanced Vehicle and Information Network Systems Center of Innovation recently participated in a public meeting for the study at the First Flight Centennial Pavilion at Wright Brothers National Memorial in Kill Devil Hills, North Carolina. Ms. Morse, in collaboration with NPS staff, delivered a presentation and helped facilitate discussion among attendees. The meeting successfully informed the public of the alternative transportation analysis and served as a channel for feedback on completed tasks, in particular the assessment of transportation needs and identifying and evaluating potential strategies to address those needs.

For further information, visit the links below:

[Press Release](#) | [Newsletter](#) | [Draft CAHA Alternative Transportation Study for Bodie Island: Conditions Inventory/Assessment](#)
[Draft CAHA Alternative Transportation Study for Bodie Island: Needs](#) | [Potential Strategies](#)



Bodie Island Lighthouse, Cape Hatteras, North Carolina.

Volpe Center Hosts Air Transport Association Task Force Meeting



Volpe Center technical staff attended the meeting. From left to right: Engineering Psychologist Becky Grayhem; Engineering Psychologist and Principal Investigator of the Flight Simulator Human Factors Program, Dr. Judith Bürki-Cohen; and Engineering Psychologist Dr. Tracy Lennertz from the Volpe Center's Human Factors Center of Innovation.

Dr. Divya Chandra of the Human Factors Research and System Applications Center of Innovation recently hosted the Air Transport Association Communications, Navigation and Surveillance (CNS) Task Force meeting in Cambridge, MA. The task force is co-chaired by Dr. Kathy Abbott, Chief Scientific and Technical Advisor for Flight Deck Human Factors at the Federal Aviation Administration (FAA) and B-777 Program Manager Brian Will of American Airlines.

Participants were briefed on a number of important current topics such as tailored arrivals, flight deck automation, trajectory-based operations, performance-based navigation, and surveillance and broadcast systems updates. Presentations included status reports on the latest research results as well as the implementation of several advanced aviation applications. The Volpe Center has been actively engaged in performing CNS and human factors research and deployment since its founding in 1970.

Nearly 100 individuals from the FAA, domestic and overseas airlines, the aerospace industry and research organizations attended the event.

Volpe Center Develops Knowledge Management System for U.S. DOT RD&T Projects

RITA's Office of Research, Development and Technology (RD&T), with the support of the RD&T Planning Team, will be rolling out the new beta version of the web-based Knowledge Management System (KMS) for U.S. DOT's RD&T projects this fall. This new resource, which the Volpe Center's Safety Management Systems Center of Innovation helped develop, will enable users to access information on most of U.S. DOT's RD&T activities, including each project's goals, objectives and intended outcomes; personnel and funding; award type (e.g., grant, contract, cooperative agreement); and status. Once fully operational, regular data inputs from each U.S. DOT agency will keep the KMS up to date.

Development of the KMS was initiated in response to an August 2006 [GAO Report](#) of the Department's RD&T activities, which recommended that the Department develop "a DOT-wide database of all of the DOT's RD&T projects that will support RITA's coordination, facilitation, and review efforts."

By consolidating these data into one system, users will be able to enhance the sharing of RD&T information within U.S. DOT and with other agencies, analyze and develop reports on these activities more effectively, and search for gaps and areas where cooperation and sharing can bring the greatest benefits. The final KMS version will include a search engine for querying the database from multiple perspectives. The current 'beta' version of KMS will be reviewed by RITA RD&T staff for functionality and screen content.

Volpe Lends Assistance to FAA in Safety Management System Pilot Project

The FAA Office of Aviation Safety (AVS) regulates and oversees the safety aspects of the civil aviation industry by establishing aviation safety and certification standards, monitoring safety performance, issuing aviation certificates and licenses, and managing the FAA rulemaking program. Within AVS, Aircraft Certification Service (AIR) is responsible for industry compliance to safety standards governing the design, production, airworthiness, and continued operational safety of civil aircraft and related components.

Recently, AIR has been investigating means to implement a more proactive approach to aviation safety that could identify and resolve problems before they emerge and create real safety concerns. In a 2009 Advanced Notice of Proposed Rule Making (NPRM), FAA announced that they may require certain aviation companies to establish manufacturers' Safety Management Systems (SMS) within their firms to enhance overall safety. As defined in the Advanced NPRM, SMS is "a comprehensive, process-oriented approach to managing safety" that includes "an organization-wide safety policy, formal methods of identifying hazards, mitigating and continually assessing risk, and promotion of a safety culture." A growing number of private sector companies in a wide variety of fields are creating and upgrading their own SMSs.

AIR has called on the Volpe Center's technical and program management experience in safety programs to assist in developing the initial requirements and evaluation and assessment criteria that an aviation firm would have to meet in order to obtain FAA acceptance for its SMS. These criteria will then be tested against existing aviation SMSs. This effort is expected to last into early 2011, at which point FAA will decide how to proceed.

Alcohol Countermeasures Program (continued)

In addition to being a long-standing program at the Volpe Center, it is remarkable for having had only two technical program managers in its forty-year history. Dr. Art Flores was program manager from 1970 until 2005. Today Ed Conde manages the program. At NHTSA's request, the Volpe Center frequently provides expert testimony for pre-trial hearings, court appearances, telephone testimony, depositions and affidavits on the validity of breath alcohol tests and testing devices. The Volpe Center helped to develop, validate and/or calibrate these technologies through scientific testing.

Additional information is available at the [Alcohol Countermeasures Program website](#).



A screenshot of the Knowledge Management System (KMS) shows search capabilities.

Spirit of Volpe Volunteerism Comes Full Circle



Paige Mochi, Volpe Center Engineering Aide with Christopher Roof, Chief of the Volpe Center's Environmental Measurement and Modeling Division.

Paige Mochi, a current Engineering Aide at the Volpe Center, is a past participant of the Lunch Buddies program. Lunch Buddies is a collaborative effort between the Volpe Center and the neighboring Kennedy-Longfellow Elementary School in East Cambridge. Volpe Center employees volunteer their lunch breaks to read to second- and third-graders every two weeks during the school year.

Ms. Mochi participated in the Lunch Buddies program as a 2nd and 3rd grader. Her Lunch Buddies mentor during that time was Lauren Curry, a Presidential Management Intern who worked at the Volpe Center. A few things come to her mind when Paige remembers her time in the program, especially the new book she received at the end of her first year of Lunch Buddies and the car crash demonstration she and other students in the program saw when they visited the Volpe Center during 3rd grade.

Paige came back to the Volpe Center as a high-school student volunteer, and is currently working as an Engineering Aide in the Environmental Measurement and Modeling Division through the

Student Temporary Employment Program (STEP). This fall, she will enter her freshman year at Boston's Wentworth Institute of Technology, where she will study industrial design.

For more information on the Volpe Center's Lunch Buddies Program, click [here](#).

40th Anniversary Open House

The Volpe Center will host an Open House on October 15, 2010 in commemoration of 40 years of service to U.S. DOT and the Nation and as an anchor tenant in Kendall Square's research and technology community. Colleagues and neighbors are invited to experience project demonstrations and simulations related to air traffic management, worldwide maritime vessel tracking, corporate average fuel economy modeling, rail crash energy management, and acoustics research on quiet cars.

Check our website for further information or contact: [Alison Kruger, Strategic Outreach and Government Relations](#).



Kam Chin, Multimodal Logistics Enterprise Division Chief, in the Volpe Center's Maritime Safety and Security Information System lab.

Volpe Center Information

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