

BETTER ROADS SAFER ROADS

RURAL TOOLKIT
DEvised TO HELP
HIGH-CRASH-RATE
AREAS IMPROVE
TRANSPORTATION
SAFETY

MATH PROVES
THE SAVINGS
IN PAVEMENT
PRESENTATION
STRATEGIES

SAFE AT ANY AGE

EFFECTIVE MESSAGING FOR A
MULTIGENERATIONAL WORKFORCE

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The Local Technical Assistance Program (LTAP) is a nationwide effort financed by the Federal Highway Administration and individual state departments of transportation. Its purpose is to translate into understandable terms the best available technology for roadways, bridges, bicycle and pedestrian facilities, and public transportation for city and county roadway and transportation personnel. The TxLTAP, operated by the University of Texas at Arlington, is sponsored by the Texas Department of Transportation (TxDOT) and the Federal Highway Administration. This newsletter is designed to keep you informed about new publications, techniques, and training opportunities that may be helpful to you and your community.

TRAFFIC CALMING: A RESOURCE TO HELP COMMUNITIES IMPROVE SAFETY & MOBILITY

by Guan Xu, FHWA Office of Safety

The primary purpose of traffic calming is to support the livability and vitality of residential and commercial areas through improvements in non-motorist safety, mobility, and comfort. These objectives are typically achieved by reducing vehicle speeds or volumes on a single street or a street network. Traffic calming measures consist of horizontal, vertical, lane narrowing, roadside, and other features that use self-enforcing physical or psycho-perception means to produce desired effects. Because there are many different ways to employ traffic calming measures, traffic calming is a broad and complex topic.

To promote understanding of this complicated issue, FHWA, in partnership with the Institute of Transportation Engineers, has released the [Traffic Calming ePrimer](#). This ePrimer is a free, publicly

available online resource representing many decades of traffic calming experience in the United States. It has also been vetted by key community stakeholders, including transportation, safety, and emergency management officials.

The ePrimer presents an overview of the toolbox of individual traffic calming measures and its relationship to other transportation initiatives, offers research findings as to the impacts of the tool in regards to mobility and safety from the standpoint of different user types, outlines different applications, and provides numerous case studies. For ease of use, the ePrimer has been separated into 8 distinct topical modules, each of which is broken down into smaller sections.

Modules contained in the traffic calming ePrimer include:

1. Purpose and Organization of ePrimer.
2. Traffic Calming Basics.
3. Toolbox of Individual Traffic Calming Measures.
4. Effects of Traffic Calming Measures on Motor Vehicle Speed and Volume.
5. Effects of Traffic Calming Measures on Non-Personal Passenger Vehicles.
6. Effects of Traffic Calming Measures on Non-Motorized Users.
7. Traffic Calming Programs and Planning Processes.
8. Traffic Calming Case Studies.

For more information, visit the [Traffic Calming ePrimer page](#) or contact Guan Xu at Guan.Xu@dot.gov.



MATH PROVES THE SAVINGS IN PAVEMENT PRESERVATION STRATEGIES

Simply stated, pavement preservation strategies can save money in maintaining an agency's highway network. Today, instead of individual projects and pavements, the focus is on sustaining infrastructure through whole-life investments and quantifying risks. Pavement preservation plays a key role in managing pavement systems in these whole-life programs.

"We are in a pavement preservation mode," said James Gray of the Federal Highway Administration Office of Infrastructure and a leader of the Every Day Counts round four (EDC-4) team on pavement preservation (when, where, and how). "We are not adding substantial new capacity to our road networks. We are trying to preserve what exists."

For the past two decades, pavement preservation concentrated on doing projects with the "right treatment on the right road at the right time" mantra. This resulted in a substantial body of evidence that these treatments work when properly applied.

Now, many agencies are considering preservation as an essential strategy for managing pavement networks. In doing this,

the focus is not on projects and how long a treatment might add to a project's life. Instead, agencies look at the network, the age and condition of the pavements, and the amount of preservation appropriate to minimize overall costs. They also consider the risk that not doing enough preservation can end up being more costly.

Agencies have experience with preservation treatments and can tabulate the costs and expected impacts from using them. Each agency also can predict the need for preservation treatments from the age, condition, usage, climate, and other factors unique to sections of the pavement network. The EDC-4 pavement preservation initiative helps agencies pull together the information for their networks and identify strategies that take whole-life costs into consideration.


"It's not about selecting pavement preservation project locations. It's not about specific materials or treatments," said Steve Gaj of the FHWA Office of Infrastructure and a leader of the EDC-4 team. "It's about developing preservation as a whole-life strategy for pavement networks. It's about getting more out of your investments."

In EDC-4, 16 States and the U.S. Virgin Islands plan to demonstrate and assess the "when and where" component of pavement preservation. Another 27 States and Federal Lands Highway (FLH) expect to make it a standard practice to manage pavements proactively to preserve highway investments.

Eleven States, Puerto Rico, and the U.S. Virgin Islands plan to demonstrate and assess the "how" component of pavement preservation in EDC-4. Another 30 States and FLH plan to institutionalize the use of quality construction and materials practices to preserve pavements.

STATE SAVINGS

From 2007 to 2012, the Kentucky Transportation Cabinet embarked on a process of diamond grinding—a treatment that corrects surface imperfections in pavements—for all 536 State-maintained lane miles of concrete pavement. The program reduced the average International Roughness Index (IRI) value—a method used to measure ride quality or comfort—from 112.1 to 74.5 over the 5-year program. The cost of the program was about \$100 million,



“ It’s not about selecting pavement preservation project locations. It’s not about specific materials or treatments... It’s about developing preservation as a whole-life strategy for pavement networks. It’s about getting more out of your investments.”

but the comparable cost of non-preservation treatments to achieve the same IRI values would have been in excess of \$1 billion.

The North Carolina Department of Transportation (NCDOT) has a long-standing chip seal program and has invested heavily in measuring performance, improving specifications, and training the workforce. Of NCDOT’s 60,000 miles of paved secondary roads, about 44 percent have been treated with a chip seal, a surface treatment that combines layers of asphalt binder and aggregate.

The average cost of a chip seal treatment is \$25,000 per lane mile, compared to \$100,000 per lane mile for a traditional 1.5-inch mill-and-overlay project. By ensuring proper construction techniques and materials are used on chip seal projects, NCDOT is able to treat significantly more lane miles of paved roadways in a year than it could with a traditional mill-and-pave program.

The Washington State Department of Transportation (WSDOT) has a strategic maintenance policy under which \$13 million applied to 3,500 lane miles between 2009 and 2015 resulted in \$15 million

in annual savings by delaying major resurfacing projects. In 2014, WSDOT implemented a policy that requires at least one maintenance treatment before a capital rehabilitation or resurfacing project can be programmed.

WSDOT found that when a chip seal is applied at the right time, the cost is 20 percent of the cost of asphalt resurfacing and 30 to 40 percent of the life-cycle cost of asphalt resurfacing. Because of that, WSDOT applied 1,500 lane miles of chip seal conversion between 2010 and 2015. The agency plans to convert at least 1,500 lane miles more over the next 10 years.

WSDOT estimates that applying preservation strategies to its network will save the agency \$80 million a year through 2025. That comes from an estimated difference between \$324 million as an average annual network cost baseline and a \$244 million average annual network cost with preservation strategies applied.

LEARN MORE

For information and technical assistance on the when and where component of pavement preservation, contact Thomas Van at thomas.van@dot.gov or Steve Gaj at stephen.gaj@dot.gov of the FHWA Office of Infrastructure. See the FHWA Asset Management Web page at www.fhwa.dot.gov/asset/ for resources.

For information and technical assistance on the how component of pavement preservation, contact James Gray at james.gray@dot.gov of the FHWA Office of Infrastructure. Visit the FHWA Pavement Preservation Web page at www.fhwa.dot.gov/pavement/preservation/ for resources.

Article excerpts reprinted from the Federal Highway Administration's September/October 2017 issue of Innovator.

STUDY EVALUATES BENEFITS OF THE SAFETY EDGE, DEVELOPS NEW CMFS

by Cathy Satterfield, FHWA Office of Safety

FHWA recently released a highly anticipated report summarizing the results of an extensive safety and economic evaluation of the SafetyEdgeSM pavement treatment. In addition to the assessment of safety benefits realized by agencies installing this treatment, the report, Safety Effects of the SafetyEdgeSM Technical Summary of Crash Modification Factors, leveraged these findings to develop benefit-cost (B/C) ratios for the application of the treatment. This research builds on past studies of the SafetyEdge by using a multi-State database and state-of-the-art analysis methodology. Researchers employed a large sample of repaving projects with and without the SafetyEdge, which gave them the opportunity to develop statistically significant crash modification factors (CMFs) for several crash types using the scientifically rigorous Empirical Bayes analytical method. The CMFs were then used along with cost data from analysis by the National Center for Asphalt Testing (NCAT) to develop benefit-cost ratios for the SafetyEdge treatment on two-lane rural highways.

The SafetyEdge is constructed with a low-cost paver attachment that enables the pavement edge to be paved and compacted to a finished 30-degree angle to eliminate vertical edges and promote a smooth return to the travel lane after one or more wheels leave the pavement. Figure 1 illustrates typical overlay cross-sections of roadways where the backfill material adjacent to the edge of the pavement has settled or eroded, exposing the edge. Settling and erosion is common and may begin as soon as a few months after construction is completed. The left image shows how the angled SafetyEdge can be easily traversed by vehicles attempting to re-enter the roadway, while the image at right shows how the vertical or near-vertical pavement edge drop-off that occurs with traditional paving techniques can cause tire-scrubbing, which may lead to loss of control.

The Empirical Bayes observational before-after evaluation used data from the States of Iowa, North Carolina, Ohio, and Pennsylvania, along with that from

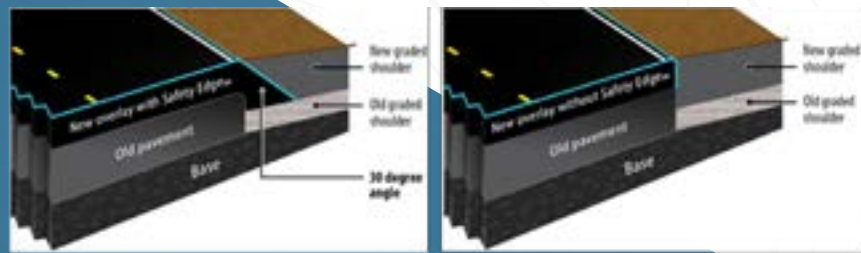
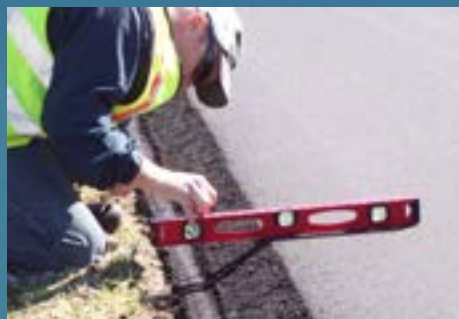


Figure 1. SafetyEdge (left) versus conventional paved edge (right) after backfill material settles or erodes.

Marion County, Florida. Researchers found statistically significant CMFs aggregated across the three States for which drop-off-related crash data were available (in Pennsylvania, the sample of drop-off-related crashes was too small to develop a CMF for this crash type). The drop-off-related CMF for Iowa, North Carolina, and Ohio combined was 0.655. The analysis also found statistically significant CMFs aggregated across the five agencies' study sites for run-off-road crashes, opposite-direction crashes, and fatal injury crashes.



The resulting CMFs for the combined sites for run-off-road and opposite direction crashes were 0.790 and 0.813, respectively. These CMFs were consistent with past studies, indicating that the SafetyEdge does address these specific crash types. The resulting fatal injury CMF of 0.892 is also reasonable based on past research, which

indicates that drop-off-related crashes are often quite severe, although they are still only a relatively small proportion of crashes. The total crash CMF was not statistically significant at the 95-percent confidence level, which was somewhat expected because the effect of the SafetyEdge is not likely to be seen amongst the large number of "property damage only" crashes in the total crash data sample.

The economic evaluation found that the SafetyEdge treatment is very cost-effective. Even with conservative estimates for pavement service life, value of a statistical life, and the depth of the pavement surface (i.e. construction costs), the B/C ratios ranged from 590 to 1,180 for run-off-road crashes, and from 730 to 1,460 for fatal injury crashes. This huge B/C ratio is the result of the nominal added cost to repave a roadway with the SafetyEdge.

A longer technical report entitled Safety Effects of the SafetyEdge details the original analysis and will be available later this year. For more information about the SafetyEdge, a focus innovation under Round 1 of the Every Day Counts initiative, contact Cathy Satterfield at cathy.satterfield@dot.gov.

RURAL TOOLKIT DEvised TO HELP HIGH-CRASH-RATE AREAS IMPROVE TRANSPORTATION SAFETY

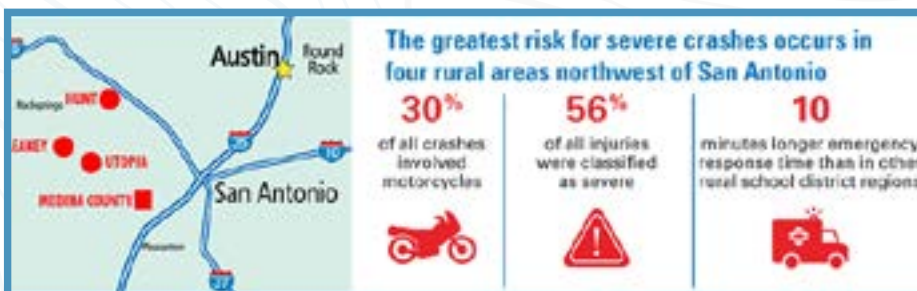
Half of all fatal crashes in Texas occur on rural roadways. Researchers with the Texas A&M Transportation Institute (TTI) have identified those areas of the state with the highest crash rates and devised a plan that focuses on solving their specific issues, despite limited resources.

“This is a targeted, evidence-based, systematic approach that not only provides a detailed analysis of a community’s crash problem, but also helps residents overcome their biggest obstacles when it comes to making their roadways safer,” says Senior Research Scientist Michael Manser, leader of TTI’s Human Factors Team in the Center for Transportation Safety (CTS). “Most rural areas simply don’t have the funding or the staff to address traffic safety issues and may not have the time to understand the steps required to address their issues.”

With project funding from the Texas Department of State Health Services (DSHS), CTS researchers created a simple, understandable and easy-to-use Rural Toolkit for Transportation Safety that provides a framework for the steps that a community can work through to address its transportation safety issues.

The toolkit combines the successful elements of the National Highway Transportation Safety Administration Safe Communities and the Federal Highway Administration Local Road Safety Plan approaches. Communities interested in addressing their transportation safety needs can now work through the toolkit stages to identify their safety issues, develop goals and associated strategies, implement the strategies, and conduct an evaluation.

The toolkit provides simplified information from previous approaches, including the steps that require input from outside sources. An area that is critically important – but many times beyond the reach of a community – is the need to obtain and analyze transportation safety data and to understand local transportation safety needs. The toolkit accounts for this by allowing project team members to serve as a source for much-needed data and statistical analyses.



For example, TTI first analyzed crash data across rural Texas according to geographic areas defined by Texas independent school districts. A four-district area clustered in the Texas Hill Country was found to have a disturbing problem – motorcycles were involved in a large percentage of its crashes, with a high number of serious upper-body injuries.



“The analysis of the linked data from Texas’ Crash Record Information System, emergency medical services and local hospitals gave us a detailed picture of the crash characteristics, roadway features, causes of the crashes – including whether alcohol or distraction was involved – and injury severity,” says TTI Crash Analysis Group Team Leader

Eva Shipp. “Of the top 10 rural areas examined, four are in an area northwest of San Antonio with the greatest risk for severe crashes.” The areas with the higher frequencies of severe crashes include roadways in Medina, Leakey, Hunt and Utopia, Texas. The analysis conducted by Shipp showed that 30 percent of all the crashes involved motorcycles, 56 percent of all the injuries were classified as severe, and emergency response time was 10 minutes longer than in other rural school district regions (likely due to the long distances EMS must travel).

Manser is now working with stakeholders in the four-district region as part of a pilot project that use the newly designed toolkit. Ideally, a stakeholder group will be formed to examine specific transportation safety issues in their region. The stakeholder group can then follow the multi-stage process outlined in the toolkit to address those problems identified from the statistics.

The TTI/DSHS team will provide guidance and resources, including information about specific safety countermeasures (e.g. increased law enforcement presence on high-crash roadways, guardrail extensions, and implementation of lower speed limits).

“The collaboration between the DSHS Injury Epidemiology and Surveillance Branch and TTI to produce the Rural Toolkit for Transportation Safety exemplifies the public health advances that can be achieved by working together to benefit local communities,” says Dan Dao, team leader with DSHS. “It is exciting to see the data collected by our program used to inform public health and prevention efforts to improve the lives of Texans.”

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SAFE AT ANY AGE

IS AGE REALLY JUST A NUMBER?

It certainly matters less than it used to when it comes to employment, as more workers are delaying retirement for financial or other reasons. A Pew Research Center analysis of federal employment data found that the proportion of Americans 65 or older who work full- or part-time has increased to 18.8 percent as of May 2016 from 12.8 percent in May 2000.

“The idea that you retire at 60 or 65 has gone out the window,” said Adele Abrams. Abrams is an attorney and safety professional who provides employers nationwide with representation in OSHA and Mine Safety and Health Administration litigation, as well as safety training, compliance assistance and program development. “So you have people who are 70 or 75 years old still working, in some cases in heavy industrial jobs.”

The result of this increase in career longevity is that today’s workforce includes a greater range of age groups – four generations of workers who grew up in different eras and bring a variety of experience levels, knowledge bases and cultures to the job.

The challenge for safety professionals is to deliver messaging that effectively can reach this diverse group of workers, regardless of their age or stage of life. Although it’s important to recognize that every individual is unique and likely to defy simple stereotypes, safety professionals should keep in mind some age-related trends:

THE PHYSICAL EFFECTS OF AGING

As workers begin to stay in their jobs into their late 60s and even 70s, safety professionals must consider ways to minimize the likelihood of injury resulting from changes in health or physical abilities.

“Especially in manual labor or highly physical jobs, we just don’t have precedents of how to support people in successfully maintaining their ability to work as they reach those older ages,” said Jennifer Rineer, a research scientist in workplace health and safety for RTI International and a member of the Society for Industrial and Organizational Psychology. “So, it’s important to check in with people throughout their careers about what kinds of support they need to continue to perform their jobs effectively. Is the same job they started years ago still feasible for them? Is there flexibility in the ways that roles can be shaped to better suit people’s changing abilities and needs?”

COMFORT WITH TECHNOLOGY

It’s easy to understand why younger workers might be more familiar – and thus more at ease – with digital technology such as smartphones and social media than their older counterparts: Many grew up with it, and it’s more likely to be part of their daily life outside of work. A 2013 Pew Research Center survey, for example,

found that 55 percent of Americans owned smartphones, but among people 65 or older, only 18 percent owned them. However, once older people adopt technologies, they often become avid users – the same survey found that among older adults who used the internet, 71 percent reported going online every day.

One way safety pros can help workers gain comfort with technology in the context of training is to put them in groups, said Launa Mallett, lead sociologist for the health communications, surveillance and support branch of NIOSH’s mining program and a specialist in training methods, technologies, strategies and evaluation.

“We’ve found that when we’ve had two or three people working

“The idea that you retire at 60 or 65 has gone out the window.”

together, as opposed to one person on one computer, the person who might not be as comfortable with the technology was quite comfortable with the content, and so they could make effective teams,” Mallett said. “Even when we paired two people who weren’t as good with the computer but were comfortable with the content, they would work together and not be as intimidated.”

COMMUNICATION PREFERENCES

Communication gaps between generations can go deeper than pop-culture references or slang. Differing educational experiences can affect how people expect to receive information in many contexts, especially in training, Mallett notes.

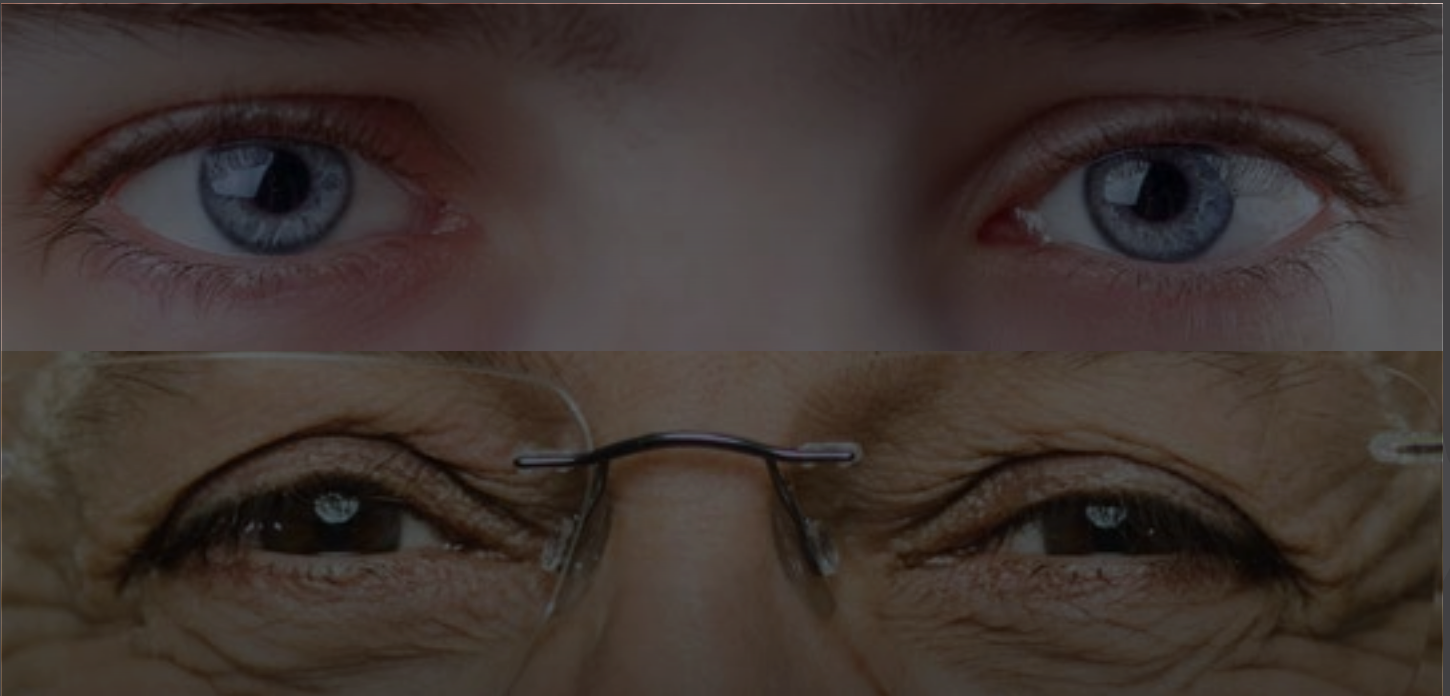
Younger employees may not be as receptive to learning from a lecturer, standard PowerPoint presentation or 30-minute video. They likely are going to want interactivity, small bursts or micro-learning, electronic tools, and interaction with the trainers and with each other. “Those things are just what they expect education should be about,” Mallett said.

Younger workers also may expect safety information to be more immediately relevant. “There’s an increasing desire to receive the information when it’s needed for a specific job or task,” she said.

“Good training is good training, regardless of your generation.”

EFFECTIVE MESSAGING FOR A MULTIGENERATIONAL WORKFORCE

“The more you can display the same key message in different ways, the more likely it is to reach a greater number of employees.”



“Think about a job aid, rather than going to a course because it’s scheduled on that particular training session day.”

Fortunately, these techniques can be helpful for older workers as well, even if they don’t demand them. “Good training is good training, regardless of your generation,” Mallett said. “But the older generations have more experience with rote, one-directional training, so they may not have those kinds of high expectations.”

HOW TO REACH EVERY GENERATION

Know your audience. Ideally, safety information should be presented in a way that makes sense to the audience, using language it understands and addressing its particular motivations and concerns. If you’re presenting training in a way that the majority of the class is going to tune out, it’s not effective training and employees are not going to work safely, Abrams said.

Of course, safety professionals’ familiarity with their audience often is limited by real-world practicalities. “If you’re onboarding one person at a time, you might be able to customize the training based on their age, their past experience, whether they’ve worked

in this type of industry before, etc.,” Abrams said. “However, if you’re suddenly opening up a new facility and hiring 300 people at once, you may not have the luxury of getting to know each worker personally.”

MIX YOUR METHODS

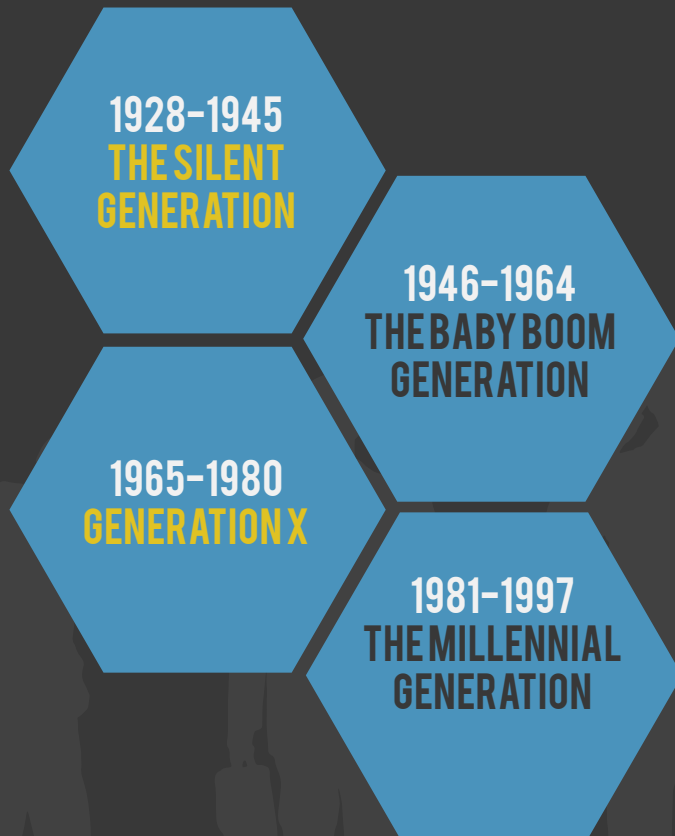
Because it often isn’t possible to tailor messaging to workers’ individual needs and preferences, using a variety of approaches may be the next best thing.

“When you have a blend of people, everybody isn’t learning the same way or comfortable with the same approaches, so I think employers have to rid themselves of this one-size-fits-all training approach,” Abrams said. “You’re going to have to mix it up, especially if you’re doing longer training classes, and recognize that older employees are not necessarily going to want to be trained strictly through interactive, computer-based methods. For example, I still use videos, which many older workers connect with, but I’ve started using much shorter (seven- or 15-minute) videos as a springboard to break people out into discussion groups.”

Continued on the next page

GENERATIONS WORKING TOGETHER

Date ranges vary from source to source, but here's one breakdown of the four generations most likely to be found in today's workforce:



Source: Pew Research Center, 2015

“...the research shows that the more you put people who are different together and let them learn from each other, the easier it becomes.”

This idea applies not only to training, but to any kind of messaging or safety campaign. “You can make an announcement in a company meeting, have a web resource or online portal where people can exchange ideas, and then also have a poster in the breakroom,” Rineer said. “The more you can display the same key message in different ways, the more likely it is to reach a greater number of employees.”

AVOID HARMFUL STEREOTYPES

Safety pros should take care not to let customization become discrimination. There's a fine line, for example, between considering that older and younger workers may prefer to receive information in certain ways and assuming they will.

“It is true that young people tend to be more technologically savvy, but a lot of times, organizations won't even present online trainings and opportunities to use new technology to their older workers,” Rineer said. “You end up with older people missing these opportunities, some of which may be very well-suited to them. These stereotypes, and failing to account for individual preferences and differences, are potentially most harmful – not only in terms of health and safety, but also career progression.”

EMBRACE DIVERSITY

Bringing different groups of people together isn't always easy – at least at first. Often, the best way to handle age differences in the workplace is to treat it as an asset.

“People are naturally drawn to people who are like them, so they sometimes experience tension or discomfort when interacting with people who are much younger or older or different in terms of some other demographic characteristic,” Rineer said. “That can make it challenging for people to train others or to provide constructive feedback in a way that is well received. But the research shows that the more you put people who are different together and let them learn from each other, the easier it becomes.”

Pairing the employees who have institutional knowledge with those who have new eyes to see how things could be done differently can be a powerful way to bring groups together.

“Encourage trainees to work across generations and create opportunities that highlight the strengths of the various cohorts – the workplace skills and knowledge of processes and procedures of the older, more experienced workers, and the creativity and facility with technology of the younger, less-experienced workers – showing each group what the other has to bring to the table,” Mallett said.

NEW CRASH ANALYSIS AND VISUALIZATION (CAVS) TOOL TO IDENTIFY HIGHWAY SAFETY IMPROVEMENT PROJECTS

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state-owned roads, through the implementation of highway safety improvement projects. Identifying projects that have the highest potential to maximize the return on investment involves gathering and processing big data; conducting safety and GIS analysis; identifying hot spots; reviewing crash locations; determining crash contributing factors; identifying safety problems; selecting countermeasures and project limits; and prioritizing projects. In practice, some of these activities are omitted or underperformed because transportation agencies may not have adequate time, resources, the theoretical background, the technical expertise or appropriate software and tools.

In an effort to improve and streamline the HSIP project selection process in Texas, the Texas A&M Transportation Institute (TTI) recently developed an innovative Crash Analysis and ViSualization (CAVS) tool for the Texas Department of Transportation (TxDOT) (research project 0-6912). TxDOT Districts used the CAVS tool during the 2016 and 2017 HSIP calls and will continue to use it in the future. The main benefits from this effort that was led by Dr. Ioannis Tsapakis (PI) and Dr. Karen Dixon (Co-PI) included:

- Higher number of projects submitted to the program by 57 percent.
- Reduced time needed to select projects by 20-50 percent.

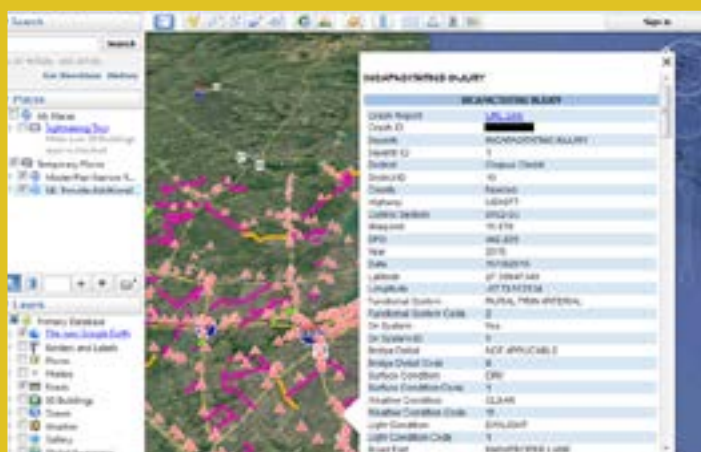
The main products of the tool include interactive Google Earth (GE) layers and data spreadsheets. Each GE layer shows the locations of fatal (K) and incapacitating injury (A) crashes that (in theory) can be prevented by a particular safety treatment or countermeasure (e.g. installation of warning signs). TTI developed more than 150 GE layers for each District, with each layer corresponding to a single countermeasure or combination of countermeasures. The tool allows users to:

- Click on any crash point and open its attribute table that contains crash, roadway, and traffic data, and also lists all countermeasures that can be applied at that location.
- Open the police report of each crash (if user has access to them).
- Use panoramic 360° view of roadways (i.e. Google street view) to diagnose safety problems and review existing roadway facilities.
- Use a ruler to measure roadway dimensions (e.g. road width, lane width, shoulder width) and distances.
- Customize the symbology of the layers and add point and line features, as needed.
- Show historical imagery that is useful for reviewing past roadway/roadside conditions and geometric configurations.
- Find and zoom into roads of interest using a search toolbar.
- Review crashes using a user-friendly interface that does not require advanced knowledge in GIS and computer programming.
- View layers on any device such as smartphone, tablet, laptop, and desktop.
- View layers without having to purchase expensive and proprietary software.

The tool also creates a spreadsheet that contains the crash data and the results of safety and GIS analyses. The spreadsheet allows users to further review and process crash data and develop charts, graphs, summary tables, and other aggregate statistics that may be useful in the project selection process.

Based on positive feedback received from TxDOT officials and the benefits realized from the implementation of the CAVS tool, TTI has started to develop similar products for other state and local agencies throughout the country.

For more information, contact Dr. Tsapakis at i-tsapakis@tti.tamu.edu or 210-321-1217.





FHWA AWARDS NEARLY \$54M IN ADVANCED TRANSPORTATION & CONGESTION MANAGEMENT TECHNOLOGIES GRANTS

On October 4, 2017, the Federal Highway Administration (FHWA) awarded Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grants valued at \$53.6 million for 10 states to fund advanced technologies that will improve mobility and safety for drivers and enhance the performance of the nation's highway system.

"These technologies are the future of U.S. transportation," said Acting Federal Highway Administrator Brandye L. Hendrickson. "With innovations like these, we are giving state and local officials the tools needed to address the growing congestion problems of our nation's highway system."

FHWA's ATCMTD program funds cutting-edge technologies that are ready to be deployed to enhance existing traffic capacity for commuters and businesses.

The grants will fund 10 projects that include advanced real-time traveler information for drivers, public transit riders and freight shippers, vehicle-to-infrastructure communications

that will enhance safety and pave the way for autonomous vehicles, and congestion-relieving traffic management systems.

The FHWA received 68 applications from 52 states and localities requesting more than \$362 million.

Hendrickson added that the volume of applicants was an indication of interest in the program and of the increasing recognition that innovative solutions are needed to improve our highways.

ATCMTD was established under the "Fixing America's Surface Transportation" (FAST) Act. State departments of transportation, local governments, transit agencies, metropolitan planning organizations and other eligible entities were invited to apply under the program.

STATE	PROJECT NAME	FUNDING	RECIPIENT / PROJECT DESCRIPTION
AZ	Loop 101 Mobility Project	\$6.0M	Arizona DOT. The funding will be used to improve safety and existing arterial capacity in the Loop 101 corridor by deploying technology and systems to support ICM, public transportation, SMARTDriveSM and other connected traffic management and other real-time information technologies.
CA	Global Opportunities at the Port of Oakland Freight Intelligent Transportation System	\$9.7M	Alameda County Transportation Commission. The GoPort Freight ITS project will deploy the nation's first integration of Freight Community System and advanced ITS technology that will include a new port-specific TMC, traffic sensors, advanced traveler information, traffic messaging, trucking information for mobile apps, rail grade warning and terminal queue information.
FL	Connecting the East Orlando Communities	\$11.9M	Florida DOT. The FDOT, MetroPlan Orlando and the University of Central Florida (UCF) will utilize the grant to advance numerous ITS technologies as part of PedSafe, GreenWay, SmartCommunity and SunStore.
ID	SMART Arterial Management	\$2.2M	Ada County Highway District. The funding will be used to replace traffic signal controllers and detection systems at 82 intersections to implement new traffic signal performance measures.
MI	Improving Safety and Connectivity in Four Detroit Neighborhoods	\$2.2M	City of Detroit. The funds will be used to increase mobility for residents in four target neighborhoods with high-traffic corridors.
OH	Connecting Cleveland Project	\$5.8M	Greater Cleveland Regional Transit Authority. The CCP will improve communications infrastructure, enhance rider and passenger safety and reduce rider travel time. It will also enhance the overall efficiency of the transportation system while contributing to community revitalization.
SC	Greenville Automated (A- Taxi) Shuttles	\$4.0M	County of Greenville. The deployment of an integrated system of Automated Taxi-Shuttles (A-Taxis) on public roads will be the first in the nation—improving access to transportation for disadvantaged and mobility impaired residents.
TX	The Texas Connected Freight Corridors Project	\$6.1M	Texas DOT. The Texas Connected Freight Corridors project will deploy connected vehicle technologies in over 1,000 trucks and agency fleet vehicles that will be able to transmit data and receive warnings from 12 CV applications.
VA	Truck Reservation System and Automated Work Flow Data Model	\$1.5M	Virginia Port Authority. The project involves the design, implementation and deployment of a second-generation truck reservation system that builds on the successes of the Port of NY/NJ reservation system for access to container terminals.
WA	Multimodal Integrated Corridor Mobility for All	\$4.1M	City of Seattle DOT. The MICMA project will leverage and enhance Intelligent Transportation System (ITS) and Mobility-as-a-Service (MaaS) platforms to create a multimodal operations environment that responds to all users.

TOTAL: \$53,680,000

NATIONAL CENTER FOR RURAL ROAD SAFETY OFFERS ARCHIVED SAFETY CENTER TRAINING

Did you know that the National Center for Rural Road Safety provides links to archived training sessions and webinars hosted by the Safety Center Team? Safety Center webinar sessions are available online with webinars that date back to November 2015.



National Center for
Rural Road Safety

A listing of the available seminars are included below.

November 2015	Introduction to the National Center for Rural Road Safety
December 2015	Understanding Organizational Culture and Its Impact on Safety Culture
January 2016	Application of Systemic Safety to a Non-Engineering Concern
February 2016	Rural Signing and Marking Resources
March 2016	An Overview of the Factors and Processes to Increase Organization Safety Culture
April 2016	Crash Risk Factors for Low-Volume Roads: an ODOT Case Study
May 2016	Louisiana's Regional 4E Approach to Saving Lives: the Goal is Destination Zero
June 2016	usRAP: An Innovation in Data Driven Safety Analysis
July 2016	Roundtable on the Public Health Side of Rural Transportation Safety
August 2016	TZD through Improved TSMO and Rural Emergency Response
September 2016	National Working Summit on Transportation in Rural America
October 2016	NO WEBINAR
November 2016	Defining the Future for Safe Rural Transportation in America
December 2016	Toward Zero Deaths-Proactive Steps for Your Community
January 2017	Assessing the Operational and Cultural Environment of the Transportation Workforce
February 2017	Small Town and Rural Multimodal Networks
March 2017	Safety Performance Management
April 2017	Converting Paved Roads to Unpaved
May 2017	Incorporating Safety Data in the Planning Process at the Rural Level
June 2017	ITE Vision Zero Virtual Toolbox
July 2017	How to Address Roadway Safety Issues for ATVs and Other Off-Road Vehicles
August 2017	Collaborating with Law Enforcement to Reach Zero
September 2017	FHWA Safety Data and Analysis Toolbox

Visit the National Center for Rural Road Safety at <https://ruralsafetycenter.org/training-education/safety-center-trainings/archived-safety-center-trainings/> for more information.

Is your airbag **defective**?
Check your vehicle today.



AIRBAGRECALL.COM

Did you know that nearly 70 million Takata airbag inflators are or will be under recall by 2019? For Texas residents, the situation is particularly urgent because prolonged exposure to high heat and humidity degrades the chemical propellant in a defective airbag inflator over time; which makes it more explosive and increases risk of serious injury or death. Even a minor fender bender can cause the defective airbag inflators to rupture, spraying metal shrapnel into drivers and passengers. Two of the eleven confirmed deaths in the United States attributed to the Takata airbag inflator occurred in Texas.

Visit nhtsa.gov/recalls to check your vehicle identification number (VIN) using the free VIN Look-up Tool for open recalls and learn if your vehicle has a defective airbag inflator. It is important to note, that even if your vehicle is not currently under a recall, it could be affected in the future. To be notified of future recalls, you can sign up for e-mail alerts at nhtsa.gov.

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While training and information sharing at conferences or through a newsletter can do a lot of good, TxLTAP recognizes sometimes there is just nothing like rolling up your sleeves, experiencing the problem first hand and then offering a meaningful solution. That's why in addition to hosting classes and publishing Better Roads, Safer Roads, our program offers local roadway agencies an opportunity to consult directly with a TxLTAP subject matter expert to specifically address your organization's unique issue. And like all resources TxLTAP offers, there is no charge to receive our help or expertise.

Do you need information on proper method for fixing your lingering road problem? Would it help if someone came out to watch your road crew perform a repair and offer suggestions on how to save time and money in the future? Could you use the help of a traffic engineer who could assess a problematic intersection? Would it be a benefit to you if a subject matter expert came to ride the roads and developed a training presentation specific to your needs?

Take advantage of our technical assistance service!

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