Disturbing Trends in Highway Safety in the U.S.A.  

Traffic Fatalities Increase Significantly - State Legislators Pay Little Attention

The latest statistics from the National Highway Traffic Safety Administration (NHTSA) show a significant increase in traffic fatalities for 2015. The Advocates for Highway & Auto Safety (Advocates) also determined that all states are still missing "critically important safety laws,” and that 2015 experienced “the fewest number of states enacting safety laws since Advocates began publishing the report in 2004.” These are two disturbing trends associated with highway safety.

The Advocates are continuing their effort to persuade more states to pass important safety laws. “Across the nation, legislatures are missing in action while more people are being killed in motor vehicle crashes. Last year only six states improved their highway safety laws while early predictions show deaths on the rise for the first half of the year. We are missing state leaders who are willing to fight for and advance proven lifesaving laws. More people are dying on our roads and unfortunately, fewer Governors and state legislators are making safety a priority. As legislatures kick into gear in 2016, we urge them to advance these laws. They will save lives and save taxpayer dollars,” said Jackie Gillan, President of Advocates. Ms. Gillan also emphasized how important enforcement of the safety laws that already exist is, and that a primary enforcement law (vehicles can be stopped and fined based solely on a primary law) is much more effective than a secondary enforcement law which requires a primary enforcement infringement first.

At the unveiling of the Advocates’ 2016 “Roadmap of Highway Safety Laws” which documents how the U.S.A. is progressing in highway safety laws, Dr. Mark Rosekind, NHTSA Administrator stated, “NHTSA’s estimates for the first six months of 2015 show an alarming rise in

Allegations that New HOT Lanes on I-405 North of Seattle Cause Additional Delay on General Purpose Lanes Refuted by WSDOT

Inrix Analysis Challenged; HOT Lanes Use Exceeds Estimates

A number of news reports over the past couple of weeks have claimed that the implementation of Express Toll Lanes (HOT lanes) on I-405 north of Seattle are causing additional delay on the general purpose lanes. These claims are based on a report issued by Inrix.

The WSDOT replied through a report issued by Mark E. Hallenbeck, Director, Washington State Transportation Center. In the report, it is stated that “the Inrix analysis used data from a limited number of locations (four) and produced a biased review of the performance of the corridor. Given the data resources that Inrix has at its disposal, one must wonder why the paper does not present a full review of the

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Kansas City Transportation Authority and Bridj Forms Partnership to Provide Mobility Options

Ford to Provide Vehicles

In a unique arrangement, the Kansas City Area Transportation Authority, the Urban technology company Bridj, and the Ford Motor Company will soon start a pilot program to add a van service to existing transit services and other transportation services such as carsharing and taxi services.

“Today, we are bringing another transit option to the region with the introduction of microtransit,” said Robbie Makinen, KCATA president and CEO. “By combining the intelligence of Bridj technology with capable and flexible Ford Transit vehicles, we are creating a seamless and borderless transportation network for our residents that is easy to use, comfortable and affordable.”

“Ride KC: Bridj” is scheduled to launch in early March. Bridj’s platform determines where riders want to go and how to get them there most efficiently. Using the Bridj mobile app, riders can request on-demand shuttle service that they can access via pop-up shuttle stations.

“Our goal is to make people’s lives better by changing the way the world moves,” said Erica Klampfl, global mobility solutions manager, Ford Research and Advanced Engineering. “The Ford Smart Mobility plan supports our commitment to innovation, and is aimed specifically at developing smarter mobility services. We are excited that Ford Transit was selected for Ride KC: Bridj because this is one of many projects that will help us gain insights into what works and develop smarter, more connected mobility solutions and service-oriented products.”

Ten 14-seater Ford Transit passenger vans will be used for the pilot program. Bright logos on the sides will make for easy visibility.

“Bridj will be an empowering tool that will offer one more option to make it easier for people to get around,” said KCATA’s Makinen. “KCATA is a place where bus, bike, streetcar and rapid transit come together to create a seamless and borderless transportation network that’s easy and friendly to use. Bridj will be a valuable addition to Kansas City’s mix of transportation options.”

The one-year pilot program initially will include downtown Kansas City, the near east and west sides, Hospital Hill, Crown Center, portions of Midtown, University of Kansas Medical Center and the Historic 18th and Vine Jazz district. It will augment and serve as a gateway to other forms of transit as many pick-up locations will be at bus stops and areas served by existing Kansas City transit and bike-share systems. Additional routes will be added based on rider demand as identified through Bridj technology.

“Only 18 percent of jobs in the Kansas City region are accessible within 90 minutes when using existing mass transit options,” said Bridj’s George, citing figures from the Brookings Institute. “By improving access to jobs, Ride KC: Bridj is a catalyst for social and economic opportunity, and an example of what is possible when cities adopt technological innovation and work in collaboration with private entities to create a truly modern city.”

For more information, contact Cindy Baker at Email: CBaker@kcata.org, Tel. (816) 346-0209.
Los Angeles Makes Available a Unique App Covering All Forms of Transportation

Working in Partnership With Xerox

The City of Los Angeles recently launched a new app, developed in partnership with Xerox, to enable commuters and travelers in general to compare optimized trips via various modes, apply personal preferences, and make bookings where applicable. In addition, the app will collect anonymous travel data that is foreseen to be useful for transportation planning purposes.

The City of Los Angeles provided the following information about the app:

“The City of Los Angeles is introducing the Go LA app, powered by Xerox, a solution that integrates all the available methods of getting around the second largest metro area in the United States. Unlike other efforts to improve the daily commute, the Go LA app captures the universe of transportation options and computes the shortest, cheapest, and most sustainable way to get to your destination. The City of Los Angeles is piloting the app in partnership with Xerox to provide travelers with optimized transportation choices to simplify urban mobility.”

“The Go LA app will help Angelenos get where they want to go by connecting smart technology with infrastructure,” said Los Angeles Mayor Eric Garcetti. “Go LA gives users the opportunity to move around in smarter, faster, cheaper, and greener ways by linking them to all the transportation options available to them — from freeways to Metro to bike routes — while also providing the city with useful data to help us make policy decisions that benefit residents.”

“The app aggregates and calculates the time, cost, carbon footprint, and health benefits from walking, biking, driving your own car, parking, taking public transit, as well as the emerging private transportation options — such as Lyft, Zipcar and FlitWays — giving users a variety of ways to reach their destination.”

David Cummins, senior vice president, Mobility Solutions, Xerox, said, “There are individual apps for public transit, car sharing and other transportation options but the Go LA app captures the array of options in a hyper-local way, mixing and matching both public and private transportation options. Beyond the seamless travel experience for citizens, Go LA will help the city glean important information they can use to advance their transportation systems.”

The app takes an individual’s destination and desired arrival time, and calculates the different routes available, categorized by “sooner,” “cheaper,” and “greener.” Details provided include length of trip, price, number of calories burned, and how much carbon dioxide is released into the air — allowing users to choose the best option to meet their needs. As the app learns more about its user’s individual travel preferences, it will eventually recommend and highlight personalized commuting options. Customers can also save trips they take often, like from home to work, in their “My Rides” area of the app.

The destination and preferred travel mode data is anonymously shared with the city and can be used for transportation planning purposes and shorter term optimization of transportation services and capital spending. Xerox will be collecting trip data and providing analytics to the City.

Xerox is working to integrate booking and payments into the app so users can coordinate their entire trip with a single click of a button. Future versions of the app will also include ridesharing so that users can carpool with people traveling in the same direction, as well as destination parking information. After enough data is collected, users will also be able to create a profile where they can set goals related to their personal fitness, financials and time, and track them within the app.

Xerox is the creator of the mobility platform that the Go LA app is built from. It was Xerox who approached the City of LA with the idea to implement this
United Nations Calls for the Full Implementation of Measures to Reduce the 1.25 Million Traffic Fatalities Worldwide Per Year

Countries Urged to Implement Road Safety Legal Instruments

The United Nations Secretary General’s Special Envoy for Road Safety, Jean Todt, and the UN Economic Commission for Europe (UNECE) Executive Secretary Christian Friis Bach made a call on Governments and the automotive industry earlier this month to implement the United Nations road safety legal instruments. These are documents that can help countries formulate appropriate legal texts for proposed legislation on road safety measures.

According to the UN, every year 1.25 million people die around the world as a result of road crashes and 20 to 50 million more are injured. It is the number one cause of death among young people aged 15-29 and takes the lives of 500 children each day. And 90% of these deaths occur in low- and middle-income countries, even though they account for only 54% of the world’s vehicles. Vulnerable road users (e.g. pedestrians, cyclists, and riders of motorized 2-wheelers and their passengers) account for 50% of the deaths. Africa has the highest mortality rate, with 26.6 fatalities per 100,000 population (versus 9.3 in Europe).

The international community has committed to halve road traffic fatalities by 2020. Over the past decades, under the auspices of UNECE, the United Nations has developed many conventions governing most aspects of road safety. These legal instruments are in place and at the disposal of countries to help them build safer vehicles and safer roads, with consistent traffic rules and road signs.

Clear national road safety strategies containing goals and targets have also proved successful in many countries around the world, particularly when coupled with information campaigns to mobilize civil society and strengthen enforcement mechanisms.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Registered Vehicles (millions)</th>
<th>Road Traffic Fatalities per Year</th>
<th>Fatality Rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North America</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>265</td>
<td>32,700</td>
<td>10.6</td>
</tr>
<tr>
<td>Canada</td>
<td>22</td>
<td>2,100</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Europe</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>36</td>
<td>1,800</td>
<td>2.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>10</td>
<td>600</td>
<td>3.4</td>
</tr>
<tr>
<td>France</td>
<td>43</td>
<td>3,300</td>
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</tr>
<tr>
<td>Germany</td>
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<td>3,300</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>Africa</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>10</td>
<td>13,800</td>
<td>25.1</td>
</tr>
<tr>
<td>Ghana</td>
<td>2</td>
<td>2,200</td>
<td>26.2</td>
</tr>
</tbody>
</table>

Notes:
Year of data differs from country to country, varying from 2008 to 2014.
In 2009 a collision at a non-signalized intersection left three people dead, including a two-year-old baby. The case was heard in 2014, and on appeal in 2015, resulted in a dissenting opinion. The accident involved three vehicles: the first, containing a mother and her baby, (turning left from Riverpointe Drive southbound to Highway 49 eastbound) was struck by a second vehicle (westbound on Highway 49) which was “drag racing” a third vehicle.

According to the dissenting opinion, the “decision to race another vehicle at 86 miles per hour on a residential highway where the speed limit was 55 miles per hour and where both drivers had children in their vehicles” was the proximate cause of the collision.

In 2014 the North Carolina Industrial Commission ruled that DOT’s breach of its duty to install a traffic signal at the intersection was a proximate cause of the accident. It held that the intervening negligence of the two drivers involved in the “drag race” was also a proximate cause of the accident, but not the sole proximate cause. As such, the DOT was not insulated from liability for its negligence.

On appeal the DOT argued that traffic signals were not intended to keep individuals from engaging in criminal acts. Traffic laws and traffic control devices were only effective when individuals obeyed them. Further, that while it may have foreseen drivers exceeding the posted speed

**Transportation Tort Liability: Case in Review**

**Signalization of Intersection and Other Factors in Dispute**

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**United Nations Calls for the Full Implementation of Measures to Reduce Traffic Fatalities**

Jean Todt and Christian Fris Bach declared: “We urge all UN member States to take their responsibilities and to ratify and fully apply the UN road safety legal instruments. We also call on the motor industry as a whole to ensure that well-established safety standards are applied to all vehicles sold in developing countries. We stand ready, with our partners in the road safety community, to help countries to accede and implement these agreements. We must work together to live up to the promise made by the international community to save millions of lives by 2020.”

The UNECE is concentrating on the following major factors associated with traffic fatalities:

- **Speed limits.**
- **Motorcycle helmets:** wearing a motorcycle helmet correctly can reduce the risk of death by almost 40% and the risk of severe injury by over 70%. Law enforcement guarantees brings use rates to increase to over 90%.
- **Safe road infrastructure.**
- **All safety features in vehicles, in particular the use of seat belts:** The use of safety belts reduces the risk of fatal injury by 40–50% in the front seats and between 25–75% in the rear seats. Yet in more than 80 countries in the world seat belts are not yet compulsory in front and rear seats.
- **Child restraint systems:** the use of child seats reduces fatality rates from 50 to 80%. Yet, only 53 countries have related legislation.
- **Drunk-driving:** Experience shows that laws based on a blood alcohol concentration limit of no more than 0.05g/dl for the general population and 0.02g/dl for young or novice drivers significantly reduces crashes. Only 34 countries have a drunk-driving law in line with this best practice.

The table on page 4 provides information on how selected countries compare in terms of fatality rates.

For more information, contact the United Nations Economic Commission for Europe Information Unit Palais des Nations, CH-1211 Geneva 10, Switzerland, tel. +41 (0) 22 917 44 44, Email: info.ece@unece.org
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**Transportation Tort Liability**

limit by five or even ten miles per hour, it was impossible to design a suburban roadway suitable for safely racing at almost 90 miles per hour.

The majority of judges rejected these arguments and affirmed the Commission’s ruling and awards. It held that given the DOT itself had recommended, in 2006, the installation of a signal at the intersection. The lack of sight distance to and from the intersection, the speed limit of the roadway, the size and complexity of the intersection, and the number of previous similar accidents at the site, indicate the accident was a foreseeable consequence of DOT’s stipulated breach of duty in failing to install a traffic signal.

The dissenting opinion argued that the Commission’s decision be reversed for two reasons:

- DOT’s breach of duty was not an actual cause of the plaintiffs’ injuries; and
- even if DOT’s breach of duty was an actual cause of the accident, the intentional criminal acts of the two racing drivers were unforeseeable and therefore constituted independent, intervening causes which would absolve DOT of liability.

The majority rebutted this by noting that DOT had not raised any actual cause arguments at either the trial nor on appeal. Therefore it could not base its opinion on arguments not first made before, and passed on by, the Industrial Commission. Further, that the sole issue it was authorized to answer was the sole issue brought by the DOT to appeal, viz. that the Industrial Commission “erred when it failed to determine that the criminal acts of third parties were the sole proximate cause of the collision.”

The majority, following the Supreme Court, argued that it was immaterial how many new events were introduced if the original cause remained operative and in force. To break the sequence of events and supersede the negligence of the original wrongdoer, the intervening conduct must be such that the original wrongdoer would have no reasonable ground to anticipate it.

With regard to the test of foreseeability, the majority held that all that a plaintiff was required to prove was that in ‘the exercise of reasonable care,’ the defendant might have foreseen that some injury would result from his act or omission. Further that it was reasonably foreseeable that a vehicle speeding toward the unregulated intersection could lead to the type of accident and injury involved in this case. The fact that the guilty driver was speeding, and thus breaking the law, did not render his actions unforeseeable.

The majority also noted that speeding was probably the most prevalent infraction committed on the highway system.

Both the majority and dissenting judges produced a number of scenarios in which the accident would have occurred even had there been properly functioning traffic signals in the intersection. The majority argued that plaintiffs’ burden did not require they prove to an absolute certainty that the accident would not have occurred had DOT installed signals at the site. It noted that it would rarely, if ever, be possible to prove that the installation of a properly functioning traffic signal would have, without any doubt, prevented an accident from occurring in any particular intersection.

Finally, because the majority found that there was competent evidence supporting the Commission’s findings of fact, and that these findings were sufficient to support its conclusions, it affirmed the Commission’s decision. The dissenting opinion held that the notion that but for DOT’s failure to install a traffic signal, the subject collision would not have occurred was speculative and was not supported by any competent evidence. The dissenting judge argued that plaintiff’s expert witness, a forensic traffic engineer, did not base his testimony on scientific, technical, or other specialized facts or data that would assist the trier of fact to understand the evidence, because it was only based on what he had read from affidavits, and from hearing testimony.

He noted that the Supreme Court has held that expert opinion testimony based merely on “speculation and conjecture” is of no more value than a layman’s opinion. He therefore held that the evidence was incompetent to support the Commission’s finding that had the intersection been properly signaled the crash would not have occurred.

The dissenting opinion argued that the determinative factor was not whether the guilty driver would have obeyed or ignored a traffic signal (had there been one) but whether the lack of a traffic signal was the proximate cause of the collision.

On the issue of foreseeability, he argued that DOT could not reasonably foresee that two drivers would engage in a road race, and one vehicle would collide with another vehicle at 86 mph on a 55 mph roadway. He held that to diminish the guilty driver’s actions to mere speeding and label them reasonably foreseeable was unfounded, and could lead to an impracticable standard with far-reaching consequences.

![The westbound approach (Highway 49) to the intersection where the fatal accident took place. (Photo: Courtesy of Google, Inc.)](image)
Facing steady population growth and increasing levels of congestion over the last couple of decades, Australia is moving full steam ahead with transit oriented development (TOD). Mixed use TODs with significant residential development in addition to office and retail development can address housing needs due to population growth. In addition, TOD developments result in lower vehicle trip generation due to higher transit and walk trips.

A TOD development underway in Perth is an outstanding example of the type of TOD development that provides an attractive, livable environment for working, living and shopping. Perth City Link is one of the city’s most exciting new redevelopments. The development is made possible by placing a rail line and a bus station underground which will do away with a physical barrier between the Perth central business district (CBD) and areas to the north. Perth’s Public Transport Authority completed the rail part of the project in 2013. This was followed by undergrounding the Wellington Street Bus Station which is scheduled to be completed later this year. A total of 33 acres were created for redevelopment.

Perth’s Metropolitan Redevelopment Authority (the Authority) provided the following on vital components of the Perth City Link redevelopment:

The Scheme is the term used for the principal planning tool that will bring the Authority’s vision to life. The Scheme reinforces the strategic planning and visioning undertaken by the Authority and connects to the bigger picture by integrating with the wider vision for the future of inner city Perth. The Scheme has the flexibility of an outcomes-based approach to development. It is supported by the Authority’s Development Policies, Design Guidelines and other planning tools to achieve the sustainable development of the Scheme Area. Its main components, challenges and principles are listed below:

- The Scheme is designed to provide opportunities for renewal, growth and innovation that can respond to changing environmental, economic and social trends and challenges.

Please turn to Page 8
Product and Industry News

An Independent Test Shows That ParkMe Provides More Accurate Results than Competitor

SBD, an automotive technology research firm, conducted a test to compare the accuracy in performance of two parking database services – ParkMe and Parkopedia. According to INRIX, the owner of ParkMe, the test results show that ParkMe provided more accurate results than competitor Parkopedia. The test was limited to five cities in the U.S. and Germany. Overall, ParkMe was more accurate than Parkopedia across a set of attributes considered to be essential to automakers.

INRIX acquired ParkMe in September 2015. ParkMe is a Santa Monica, CA company that helps consumers find parking, make reservations and mobile payments worldwide. The acquisition allowed ParkMe to expand its data aggregation and industry expertise and helps INRIX deliver a comprehensive set of parking services, including finding, comparing, reserving, and paying for parking from a smartphone or vehicle. With these expanded capabilities, INRIX has also been able to extend the parking services it offers to Audi, BMW and Lexus, among others.

SBD’s ground-truth assessment looked at 488 random parking lots in November 2015 across Berlin, Munich and Stuttgart in Germany, as well as Boston and San Francisco in the United States. SBD sent trained data collectors to evaluate on-site attributes lot by lot (backed by photographic evidence), then compared the field results to published information on respective ParkMe and Parkopedia websites. From the findings, SBD assessed overall accuracy scores, and scores per attribute, lot and city. INRIX stated that SBD was compensated for collecting the data, but the assessments and scoring were completed on an objective and independent basis.

According to INRIX, ParkMe was 23 percent more accurate in providing the precise entrance location to parking lots as compared to Parkopedia. In addition, ParkMe performed better across parking attributes including pricing information accuracy (91 percent versus 81 percent) and correct parking lot operating hours (87 percent versus 83 percent).

ParkMe has built a comprehensive parking database that includes more than 29 million confirmed spaces in over 90,000 accessible locations spanning 4,000 cities in 64 countries. ParkMe only displays publicly accessible, non-restricted lots, including both free and fee parking locations. ParkMe’s database does not include restricted-access lots. By excluding restricted lots from its worldwide dataset, consumers using ParkMe are not misrouted to locations that are unavailable to the general public.

INRIX also announced a new licensing agreement with Parknav to expand its on-street parking services to more than 20 German cities, bringing its total coverage to over 40 cities worldwide. Parknav uses machine learning, big data and predictive analytics to determine what streets will have open parking in real-time. The solution works on all road types and covers all on-street parking categories including free, metered and permit parking. BMW will be the first automaker to include INRIX’s service into its ConnectedDrive cars.

For more information, contact Mark Burfeind, INRIX North America, at (206) 240-3970, mark.burfeind@inrix.com, or INRIX Europe, Matt Simmons, +44 (0)20 7012 3509, matt.simmons@inrix.com, or website: http://inrix.com.

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Australia Embraces Transit Oriented Development

- Inherent in the Scheme is a quadruple bottom line approach to sustainability, providing opportunities for social enrichment, economic innovation, environmental enhancement and appropriate and transparent governance.
- The Scheme incorporates the requirements, provisions and opportunities to ensure sustainable growth and development, and includes important sustainability outcomes such as compact growth, mixed land use, good design, primacy of public spaces, heritage conservation, creative industries, and reduced car use. The Scheme places importance on equity, opportunity, diversity and good governance, all intrinsic elements of sustainability.
- The principles and provisions of the Scheme are intended to be applied in context to the most current technologies and best practices of the time. Creativity and innovation are encouraged, to achieve outstanding development outcomes.
- A critical mass of people, businesses and attractions are needed to generate a vibrant and successful inner city. A larger population will be the catalyst for change for inner city Perth. Increased population, businesses and tourism must be supported by facilities, services, amenities and infrastructure.
- Increased development in the inner city will also help to relieve the pressure for outward sprawl and the associated environmental, economic and social impacts of peripheral suburban development.
- A fundamental role of cities is to bring people together – both for social interaction and for trade. And finally, connectivity is the principle of a well-designed and serviced urban environment that connects people to places and to each other.
- Connectivity is principally based on integrating people, land uses and transport modes in an efficient and safe network. Good urban transport connectivity facilitates reduced car dependence and brings people out into the urban environment to interact and enjoy the city experience.

For more information, go to http://www.perthcitylink.wa.gov.au/
CBO Investigates Approaches to Federal Highway Spending

Concludes More Tolling, Benefit Cost Analysis, and Linking Spending to Performance Measures Should be Considered

Earlier this month the Congressional Budget Office (CBO) published the results of their investigation into how to make federal highway spending more productive economically. The CBO study, “Approaches to Making Federal Highway Spending More Productive,” was conducted at the request of former Senate Finance Committee Chairman Max Baucus. External reviewers include the Council of State Governments, RAND Corp., and the Brookings Institution.

There is good reason for the investigation. The CBO made the point that “Federal spending on highways (or, synonymously, roads) totaled $46 billion in 2014, roughly a quarter of total public spending on highways. About 95 percent of that amount was spent for the construction of highways or for their improvement, expansion, and major repair, and the remainder was spent for operation and maintenance.”

In addition, the CBO found two factors have combined to highlight the importance of making each dollar spent on federal highway programs more productive economically. “First, the federal government’s main source of funds for highways—gasoline tax revenues dedicated to the Highway Trust Fund—has been insufficient to pay for federal spending on highways. Since 2008, lawmakers have transferred about $143 billion from other sources to maintain a positive balance in the trust fund. Second, adjusted for changes in construction costs, total federal spending on highways buys less now than at any time since the early 1990s.”

It was also found that spending on highways does not correspond very well with how the roads are used and valued. The reasons are as follows:

- Almost all federal spending for highways occurs through formula grants to state and local governments, and historically, less than half of the funding has been tied directly to the amount of travel on the roads. Although data from the past 20 years shows that, on average, pavement quality is improving, fewer bridges have deficiencies, and highway fatalities occur less frequently, those averages mask differences between urban and rural areas and between Interstate highways and other roads, differences that sometimes are not reflected in spending.
- And, the extent to which new highways boost economic activity has generally declined over time, increasing the importance of maintaining existing capacity.
- Yet spending has not shifted much accordingly.

The CBO provides three approaches that should be considered to make federal highway spending more productive:

- “Have the federal government, or allow states or private businesses to charge drivers directly for their use of roads more often, including charging them more for using roads when traffic is more congested;
- allocate funds to states on the basis of the benefits and costs of specific programs and projects;
- and link spending more closely to performance measures such as ones for traffic congestion or road quality by providing additional funds to states that meet standards or penalizing states that do not.”

Chad Shirley and Nathan Musick prepared the study with guidance from Joseph Kile, Perry Beider, T.J. McGrath, Sarah Puro, and Robert Shocketon all of CBO provided helpful comments on the report. Sujit CanagaRetna of the Council of State Governments, Kevin DeGood of the Center for American Progress, Rocky Moretti of The Road Information Program, Martin Wachs of the RAND Corporation, and Clifford Winston of the Brookings Institution did the same. The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO.

Jeffrey Kling and Robert Sunshine reviewed the report. John Skeen edited it, and Maureen Costantino and Jeanine Rees prepared it for publication.

For more information, please go to the CBO’s website: www.cbo.gov/publication/50150, where an electronic version of the CBO’s investigation can be found.

The CBO found tolling such as the Express Lanes in the center of I-495 in Virginia to be a good strategy to make highway spending more productive. (Photo: Courtesy, TransUrban)
Disturbing Trends in Highway Safety in the U.S.A

the number of traffic fatalities. It is time for the nation to get serious about the epidemic of death on our roads. This requires concerted effort on the federal, state and local level, and it is clear, as this Roadmap shows, that there is more work to do on the state level.” NHTSA reports that “a statistical projection of traffic fatalities for the first nine months of 2015 shows that an estimated 26,000 people died in motor vehicle traffic crashes. This represents an increase of about 9.3 percent as compared to the 23,796 fatalities that were reported to have occurred in the first nine months of 2014. Preliminary data reported by the Federal Highway Administration (FHWA) shows that vehicle miles traveled (VMT) in the first 9 months of 2015 increased by about 80.2 billion miles, or about a 3.5-percent increase.”

A further disturbing trend is the significant increase in distracted driving. The Advocates for Highway & Auto Safety reports that in 2013, there were 3,154 people killed and 424,000 injured in crashes involving a distracted driver. Crashes in which at least one driver was identified as being distracted imposed an economic cost of $39.7 billion dollars in 2010. It is clear from an increasing body of safety research, studies, and data that the use of electronic devices for telecommunications (such as mobile phones and text messaging), telematics and entertainment can readily distract drivers from the driving task. The Advocates also compiled the following research findings:

- According to the NHTSA, the percentage of drivers visibly manipulating hand-held devices while driving has increased for the fourth year in a row with a total increase of 183% between 2009 and 2012.
- Research has shown that because of the degree of cognitive distraction these devices cause, the behavior of drivers using mobile phones (whether hand-held or hands-free) is equivalent to the behavior of drivers at the threshold of the legal limit for alcohol (0.08 blood alcohol concentration).
- Crash risk increases dramatically – as much as four times – when a driver is using a mobile phone, with no significant safety difference between hand-held and hands-free phones observed in many studies.
- Ten percent of fatal crashes, eighteen percent of injury crashes, and sixteen percent of all motor vehicle traffic crashes in 2013 were reported as distraction-affected crashes.

The Advocates’ 2016 Roadmap of State Highway Safety Laws also contains a “report card” for all 50 states and the District of Columbia, grading them on enactment of 15 basic traffic safety laws. The basic safety laws are based on government and private research, crash data and state experience and are considered to be critical to reducing motor vehicle deaths and injuries. The laws are listed below:

- Primary Enforcement Front Seat Belt Law
- Primary Enforcement Rear Seat Belt Law
- All-Rider Motorcycle Helmet Law
- Booster Seat Law
- Learner’s Stage: Minimum Age 16 for Learner’s Permit
- Learner’s Stage: Six-Month Holding Period Provision
- Intermediate Stage: Nighttime Driving Restriction Provision
- Cell Phone Restriction
- Age 18 for Unrestricted License
- Ignition Interlock Devices (IIDs)

The 10 Best and 10 Worst States for Having Critical Safety Laws in Place

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Critical Safety Laws in Place</th>
<th>Fatality Rate (Fatalities per 100 million VMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best States</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>12</td>
<td>1.06</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>12</td>
<td>0.57</td>
</tr>
<tr>
<td>Illinois</td>
<td>12</td>
<td>0.94</td>
</tr>
<tr>
<td>Oregon</td>
<td>12</td>
<td>0.93</td>
</tr>
<tr>
<td>Hawaii</td>
<td>11</td>
<td>1.01</td>
</tr>
<tr>
<td>Indiana</td>
<td>11</td>
<td>1.00</td>
</tr>
<tr>
<td>Maine</td>
<td>11</td>
<td>1.03</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>11</td>
<td>0.84</td>
</tr>
<tr>
<td>Washington</td>
<td>11</td>
<td>0.76</td>
</tr>
<tr>
<td>California</td>
<td>9</td>
<td>0.91</td>
</tr>
<tr>
<td>Louisiana</td>
<td>9</td>
<td>1.47</td>
</tr>
<tr>
<td>Average</td>
<td>11.0</td>
<td>0.96</td>
</tr>
</tbody>
</table>

| Worst States        |                                        |                                               |
|---------------------|                                        |                                               |
| South Dakota        | 2                                      | 1.48                                          |
| Arizona             | 5                                      | 1.40                                          |
| Iowa                | 5                                      | 1.00                                          |
| Montana             | 5                                      | 1.90                                          |
| Nebraska            | 5                                      | 1.09                                          |
| Wyoming             | 5                                      | 0.93                                          |
| Mississippi         | 6                                      | 1.58                                          |
| Florida             | 6                                      | 1.25                                          |
| North Dakota        | 6                                      | 1.47                                          |
| Average             | 5.0                                    | 1.34                                          |

Notes
How best and worst states were determined:
Best States:
A state without a primary enforcement seat belt law covering passengers in all seating positions (front and rear) or that has repealed an existing all-rider motorcycle helmet law within the previous ten years is not eligible for a green rating, regardless of the number of other highway safety laws it has enacted. States must have 11 to 15 laws including both primary enforcement seat belt laws, or 9 or more laws including both primary enforcement seat belt laws and an all-rider helmet law, to achieve a green rating.

Worst States:
The red rating indicates that the following states are dangerously behind in the adoption of Advocates’ optimal laws. States receive a red rating if they have fewer than seven laws, without both primary enforcement front and rear seat belt laws.
HOT Lanes on I-405 North of Seattle

performance of the corridor.” The report continues by stating that the Inrix data, derived from GPS devices, is not accurate enough to allocate a particular data point to a specific lane. “Therefore, it must make assumptions about where higher speed travel is occurring. Those assumptions appear to be questionable. The best description of the performance of the I-405 general purpose (GP) lanes in 2014 (with HOV operations) versus 2015 (with HOT operations) would be to say that outcomes in corridor performance are varied, with the change in performance depending on the location within the corridor being examined.” WSDOT is implementing several improvements to address some of the congested locations.

The I-405 Express Toll Lanes were implemented due to congestion on the HOV lanes and the substantial growth estimated to take place along the corridor. The toll lanes provide the option to pay a toll for a more reliable trip, according to the WSDOT.

The project began construction in 2012. WSDOT built a new lane adjacent to the carpool lane between Northeast Sixth Street in Bellevue and State Route 522 in Bothell to create a dual express toll lane system. The existing carpool lane between Bothell and Lynnwood will serve as a single express toll lane.

The 17 mile system opened in September 2015.

The project was funded by state gas tax. Pre-contract construction cost estimates for the project is $155 million. Of that $155 million, $36 million was for above-ground toll system infrastructure. This included signing, striping, cabinets, ITS, and cameras. An additional $31 million covered toll equipment, algorithm development, customer service back office adjustments, public education/marketing, toll rate setting and start-up costs. In total $67 million is the pre-contract cost for toll implementation.

The highest measured peak period traffic volumes on the toll lanes are 1,200 vehicles per hour on the northbound single lane section and 2,600 vehicles per hour on the southbound double lane section.

The net toll revenue of $3.7 million from the opening of the system to the end of 2015 exceeds the projection of $1 million over the same time period.

For more information, contact Jennifer Rash, WSDOT Toll Communications, Tel. (206) 716-1118, Email: RashJen@consultant.wsdot.wa.gov. Website: http://www.wsdot.wa.gov/Tolling/405/

Disrupting Trends in Highway Safety in the

- Child Endangerment - This law either creates a separate offense or enhances an existing penalty for an impaired driving offender who endangers a minor.
- Open Container
- Distracted Driving
- All-Driver Text Messaging Restriction - This law prohibits all drivers from sending, receiving, or reading a text message from any handheld or electronic data communication device, except in the case of an emergency.

The table shows the best and worst states in terms of implementing these critical laws.

For more information, contact Beth Weaver, tel. (301) 814-4088, Email: beth_weaver@verizon.net. Website: http://saferoads.org/
This Month’s Survey Results (Survey 1)

**Long Range Planning and Connected Vehicles / Autonomous Vehicles**

The Urban Transportation Monitor conducted a survey among transportation professionals in the U.S. to obtain information and opinions about "Long Range Planning and Connected Vehicles (CV) / Autonomous Vehicles (AV)". Altogether 800 transportation professionals were contacted via email last month. Replies were received from 42 organizations for a return rate of 5%. The results of the survey are published here.

---

**Position/employment of respondents to this survey.**

<table>
<thead>
<tr>
<th>Position/employment</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation planner at an MPO</td>
<td>31%</td>
</tr>
<tr>
<td>Transportation planner at a State DOT</td>
<td>16%</td>
</tr>
<tr>
<td>Transportation planner at local jurisdiction</td>
<td>1%</td>
</tr>
<tr>
<td>Consultant who conducted transportation planning work for a public agency</td>
<td>39%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
</tr>
</tbody>
</table>

**Have you and your colleagues discussed how connected vehicles (CV) and/or autonomous vehicles (AV) might impact the long term planning process?**

<table>
<thead>
<tr>
<th>Answer</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>26%</td>
</tr>
<tr>
<td>Yes, but informally</td>
<td>47%</td>
</tr>
<tr>
<td>Yes, we are investigating what we should do</td>
<td>24%</td>
</tr>
<tr>
<td>Yes, and we are implementing some measures in our long term planning process</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>
Long Range Planning and CV/AV (continued)

If you indicated (in the previous question) that you are investigating what to do or implementing some measures, please describe briefly what you are investigating and/or what you are implementing.

- The state is examining this topic at a high level. I am involved in this process. At our specific branch (Transportation Planning) only informal discussions have occurred with no direction or goal.
- Investigations have been limited to tracking information coming out of USDOT, AMPO, industry publications, etc. Also we’ve participated in several USDOT surveys on this matter. CDOT, at the statewide level is pushing its vision, branded as RoadX.
- As an agency business plan item, VDOT is developing and CV Program Plan. The Plan will identify the research, planning, deployment, operations, maintenance and support activities necessary to establish and sustain a Connected Vehicle program that addresses key agency goals. It is envisioned that CV technologies will deliver the following benefits:
  - Reduce congestion/vehicle hours of delay.
  - Improve travel time reliability.
  - Reduce median duration of incidents.
  - Reduce the number of fatal and injury-related crashes.
The Plan will also assist VDOT leadership in making investment decisions on CV initiatives.
- Everything from policies to impact on traffic safety to impacts on capacity.
- We have a study underway to look at policies and a framework for AV/CV. We have discussed within this study how AV/CV may impact future planning.
- Some of the areas we are discussing include impacts to VMT, parking facilities, downtown congestion, additional greenspace made available, perceptions of drivers when potentially in traffic with empty autonomous vehicles, impacts to transit ridership and ability to provide more demand responsive transit service.
- We have recognized that AV and CV will become more important fairly quickly and identified this as a trend or issue going forward that will be addressed in more detail in future plans.
- We recently completed and submitted a first round application for the US DOT Smart City Challenge initiative. Thinking through how to go about this, identifying and working with public agency, private and academic partners, has greatly stimulated our thought process on this.
- We have several staff that are involved in research and national discussions on V2V and V2I.
- We are addressing policies for autonomous vehicles. We also worked on implementation of connected vehicle alternatives.
- We are looking at impacts on VMT, land use distribution, vehicle ownership and numbers of vehicles, urban form, congestion, etc.
- We are approaching this in a number of ways. We have written into our procedure documents that analysts should be thinking about these types of changes and their impacts to future projects, but we have not developed guidance on exactly what that means yet. We have a research project in the works that is trying to estimate the range of potential impacts (uncertainty) around a number of changes to transportation (AV/CV being one, transportation as a service being another, and my more). Our goal of that research is to try and understand which potential changes have the greatest possibility to impact the performance measures that we use to evaluate projects. The changes that have the biggest potential to impact our results will get the most immediate attention as to how to properly represent that uncertainty in our analysis.
- We are working with Texas Transportation Institute (TTI) on their study.

Do you believe CV/AV will increase the capacity of roads and highways to a degree where it might put into question some longer term capacity improvements?

<table>
<thead>
<tr>
<th>Position/employment</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>41%</td>
</tr>
<tr>
<td>No</td>
<td>18%</td>
</tr>
<tr>
<td>Not sure</td>
<td>26%</td>
</tr>
<tr>
<td>Other</td>
<td>15%</td>
</tr>
</tbody>
</table>

Those who replied “Other” in the above question, provided the following comments

- No, for true capacity improvements there needs to be a high penetration of CV/AV vehicles. That’s still probably 15+ years out.
- Not sure that Colorado can ever get ahead of the growth we’ve experience in the last 40 - 50 years.
- Not in the short term, but quite possibly in longer range projects as this is better defined.
- Yes but it is just a matter of time
- Eventually, but only after the public fleet is 75% or more CV/AV
Long Range Planning and CV / AV (continued)

If you answered “Yes” in the previous question, how will you address a property owner who owns a property presently impacted by a long term planned project and who questions the need for such a project?

- If you answered “Yes” in the previous question, how will you address a property owner who owns a property presently impacted by a long term planned project and who questions the need for such a project?
- No clue. Frequently I note how automated vehicles and connected vehicles have been predicted for quite some time and that as yet they have not materialized. I personally believe, however, that automated/connected vehicles will make up a significant portion of the vehicle fleet by 2040.
- Presently this is not applicable to us, but hypothetically speaking I’d say we can’t presently predict the reduction in demand that may result from AVs.
- I do not believe the impact will be known for a few more planning cycles.
- Try to provide transparency around the parameters of the discussion and state that we will continue to investigate the need as technology continues to change.
- Tell him that the need for the project has been (or will be, as the case may be) re-evaluated using modified travel demand forecasts that take into account the effects of CV/AV.
- The “yes” is a provisional answer, a kind of speculation. The timing and exact nature of future fleets is not known, therefore does not provide a clear basis on which to reduce estimates of future capacity needs.
- Unsure.
- Refer to the long-range plans and reinforce regional buy-in and adoption.
- Hadn’t run against that. It will have to be assessed on a case by case basis. AV just “kicks the can down the road” when it comes to capacity.
- Cite real options theory.
- Good question. I answered yes as my personal belief, but it is not the agency’s stance. As an agency we will need to work on uncertainty ranges and need to work with property owners with projects that mitigate risk as opposed to meet a specific design target / threshold. There is a lot to work out there, not sure we will ever make it.
- The answer would depend on when the planned project is scheduled for implementation.
- CV/AV tech is too far out to affect property owner objection

What is your personal opinion about the need to account for CV/AV in the long term planning process?

<table>
<thead>
<tr>
<th>Position/employment</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>We need to account for CV/AV</td>
<td>29%</td>
</tr>
<tr>
<td>We need to account for CV/AC but wait until techniques have been formally recommended</td>
<td>50%</td>
</tr>
<tr>
<td>There is no need to account for CV/AV</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>21%</td>
</tr>
</tbody>
</table>

Those who replied “Other” in the above question, provided the following comments

- I think we should include which project needs have the most exposure, but as of yet I do not think it’s prudent to change course. While there is a lot of smoke there is as yet no fire. This may still be much ado about nothing. I do not think this will turn out to be nothing, but the potential exists and the information is not fully formed enough to shift from current methods.
- We need to account for CV/AV by acknowledging it now and developing analytical techniques.
- We should account for not only the potential capacity improvements but also expected/assumed safety benefits.
- In our MPA there is no present need to address during the current planning horizon.
- Hard to account for unknown impacts
- Not needed yet
Please provide a reason for your answer in the previous question.

Reasons provided by respondents who selected “We need to account for CV/AV”

- Every transportation and development project should begin to consider the impacts of CV/AV. We may not know the answers at this time, but we should train staff to ask the questions. As technology changes and we know more answers, professionals will have developed the habits to investigate and apply available knowledge related to CV/AV.
- This could mean significant improvements in highway safety and should be reasonably deployed to the extent possible.
- Clearly MPOs, localities, states, and the USDOT need to plan now for the rollout of automated vehicle and smart infrastructure technologies. Of course there is only so much we can do now but the important thing is to start now in preparing for the rollout of such technologies over time.
- Driver assist technologies are already available and will quickly progress to be more automated. The safety and operational benefits of a more automated system is important to society.
- CV/AV is coming, it’s just a matter of when.
- Vehicles of visitors, customers, guests, etc. will be more connected to their destination. This could change access, circulation and wayfinding elements of the site planning process.
- It is happening
- Isn’t it obvious? There are techniques for doing this.
- Our planning processes need to shift to uncertainty bars as opposed to a specific forecast / prediction. CV/AV will add to that uncertainty, they will impact the future of travel, we are just not sure how much and in which direction. So we need to put book-ends around the issue and communicate that uncertainty better.

Reasons provided by respondents who selected “We need to account for CV/AV but wait until techniques have been formally recommended”

- Capacity improvements, if any, have not been determined to any level of reliable detail.
- We know we need CV/AV technologies but the applications have not been developed far enough to know exactly what we will need and when. What will the infrastructure needs be? We can start to account for some elements such as higher-capacity communications. Piloting technologies to gain a better understanding of how it will improve technology challenges and understanding the data and metrics is a good first start. Once technology is ready there will be a phased approach similar to the initial deployment of ITS.
- We will be adding a discussion in the LRTP on the need to consider more “flexibility” in the plan and planning process. However, this has a greater focus on developing a “connected” or “smart” city.
- We are so short staffed. I am not sure we have the resources to research and learn about CV/AV in detail enough to how they are going impact the road system.
- At least acknowledge the potential someplace in the RTP
- Impacts are unknown
- Given the glacial pace of change in this state, I think this is still years, if not decades, away.
- Don’t know what to plan for until some guidance is issued.
- The trickle down to smaller communities will be much slower.
- Like any analysis tool we use in transportation planning, the tools and methodologies need to carefully developed, tested, refined and uniformly/universally applied in order to have credibility.
- It is pre-mature to assess the importance of this technology as there is virtually no market penetration.
- Right now, at this point we do not know the final implications. There is no data or recommendations to follow.
- The potential variabiliy in outcomes seems extreme, and I am skeptical that adoption will occur very rapidly.

Further comments?

- The impacts at signals and weaving areas of just connected vehicles could be significant. Connected vehicles could greatly reduce the start-up loss time associated with signals, thus greatly increasing the saturation flow rate of vehicles through a signal and leading to significantly more capacity on arterials. A similar situation could occur at weaving areas of access controlled facilities and thus adding capacity to existing choke points. All of this is possible with just connected vehicle technology and level 2 or level 3 automation which is almost available on vehicles today.
- Agencies need to begin to think about CV/AV, understand it and track it so when the time is right, they are equipped to address issues and take advantage of it’s benefits.
- There is a greater need to develop a “connected” or “smart” city that can address current traffic management activities. Focusing on new technological smart vehicles that may be introduced slowly over a 10 to 15 year timeframe does not address current issues/needs.
This Month’s Survey Results (Survey 2)

Think Tanks Active in Transportation

Earlier this month, *The Urban Transportation Monitor* conducted a survey on Think Tanks Active in Transportation. Seven think tanks were contacted and questionnaires were sent via email. Four replied. The results of the survey are published here.

<table>
<thead>
<tr>
<th>NAME OF THINK TANK</th>
<th>CONTACT PERSON</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMBARQ at WRI Ross Center for Sustainable Cities</td>
<td>Benoit Colin</td>
<td>(202) 729-7600 <a href="mailto:cities@wri.org">cities@wri.org</a></td>
</tr>
<tr>
<td>Eno Center for Transportation</td>
<td>Ann Henebery</td>
<td>(202) 879-4700 <a href="mailto:ahenebery@enotrans.org">ahenebery@enotrans.org</a></td>
</tr>
<tr>
<td>AAA Foundation for Traffic Safety</td>
<td>Jurek Grabowski</td>
<td>(202) 638-5944 <a href="mailto:jgrabowski@aaafoundation.org">jgrabowski@aaafoundation.org</a></td>
</tr>
<tr>
<td>Reason Foundation</td>
<td>Robert Poole</td>
<td>(310) 391-2245 <a href="mailto:bob.poole@reason.org">bob.poole@reason.org</a></td>
</tr>
<tr>
<td>Victoria Transport Policy Institute</td>
<td>Todd Litman</td>
<td>(250) 360-1560 <a href="mailto:litman@vtpi.org">litman@vtpi.org</a></td>
</tr>
</tbody>
</table>
## Think Tanks Active in Transportation

<table>
<thead>
<tr>
<th>Name of organization and location</th>
<th>EMBARQ at WRI Ross Center for Sustainable Cities</th>
<th>Eno Center for Transportation</th>
<th>AAA Foundation for Traffic Safety Washington, D.C.</th>
<th>Reason Foundation Los Angeles, CA</th>
<th>Victoria Transport Policy Institute Victoria, British Columbia, Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year the organization was founded</td>
<td>2002</td>
<td>1921</td>
<td>1947</td>
<td>1978</td>
<td>1995</td>
</tr>
<tr>
<td>Mission as it relates to transportation</td>
<td>We help cities make sustainable transport a reality.</td>
<td>To seek continuous improvement in transportation and its public and private leadership in order to increase the system's mobility, safety, and sustainability.</td>
<td>The organization's mission is to identify traffic safety problems, foster research that seeks solutions and disseminate information and educational materials. Today the Foundation is recognized as a leader in traffic safety, being cited for its landmark studies on distracted driving and creating a conversation on traffic safety culture publishing its annual safety culture survey. Over time the Foundation has expanded its scope and diversified areas of concentration while still focusing on AAA priority issues which include senior safety and mobility, teen driving, road safety and safety culture.</td>
<td>To develop market-based transportation policies for federal, state, and local levels of government.</td>
<td>Developing innovative solutions to transport problems.</td>
</tr>
<tr>
<td>Geographic focus</td>
<td>Brazil, China, India, Mexico, Turkey, and cities in developing countries.</td>
<td>U.S.</td>
<td>U.S., Canada</td>
<td>U.S.</td>
<td>Worldwide</td>
</tr>
<tr>
<td>Funding sources</td>
<td>The Center was established by a generous donation from Stephen M. Ross Philanthropies, building on the strengths of EMBARQ's sustainable urban mobility work. We especially acknowledge the contributions to our cities and transport work from Bloomberg Philanthropies, Caterpillar Foundation, Children's Investment Fund Foundation (CIFF), Citi Foundation, FedEx, Johnson Controls, Oak Foundation and Shell Foundation.</td>
<td>Various</td>
<td>AAA Mostly</td>
<td>Individual donors: 53% Foundation grants: 44% Corporations 3%</td>
<td>Consulting: 80% Public speaking (conferences and workshops): 20%</td>
</tr>
<tr>
<td>Number of researchers active in transportation</td>
<td>200</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

N/A = Not available
## Think Tanks Active in Transportation (continued)

<table>
<thead>
<tr>
<th>Name of organization and location</th>
<th>EMBARQ at WRI Ross Center for Sustainable Cities</th>
<th>Eno Center for Transportation</th>
<th>AAA Foundation for Traffic Safety Washington, D.C.</th>
<th>Reason Foundation Los Angeles, CA</th>
<th>Victoria Transport Policy Institute Victoria, British Columbia, Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you participate in contract work? (e.g., research studies administered by the Transportation Research Board or the U.S. DOT)</td>
<td>N/A</td>
<td>Yes</td>
<td>No, we tend to fund contract work mostly.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes (in previous question), please describe some of the most recent contract work you have participated in, and please indicate who the client was.</td>
<td>N/A</td>
<td>The Role of Transit Governance in Regional Transit. Funded by TransitCenter.</td>
<td>N/A</td>
<td>N/A</td>
<td>Strategic transportation planning for the Dubai Road and Transport Authority; Review and strategic planning for the Environmentally Sustainable Transportation (EST) in Asia Forum, for the UN Center for Regional Development in Asia; Research on rural public transit service planning and evaluation for the American Public Transportation Association (APTA).</td>
</tr>
<tr>
<td>What do you believe are the most critical issues in urban transportation today?</td>
<td>High-quality, safe, bus rapid transit (BRT) Safe walking Safe biking Safer urban design Transit-Oriented Development Innovative services.</td>
<td>Safety, mobility, sustainability.</td>
<td>Population growth in cities and the aging population.</td>
<td>Inadequate funding Lack of serious benefit-cost analysis Movement away from users-pay/users-benefit principle.</td>
<td>The need to develop more comprehensive and multi-modal transport system performance evaluation, planning practices and funding.</td>
</tr>
<tr>
<td>Please provide the name of the person leading your transportation work and his or her e-mail address.</td>
<td>Dario Hidalgo <a href="mailto:dhidalgo@wri.org">dhidalgo@wri.org</a></td>
<td>Paul Lewis <a href="mailto:plewis@enotrans.org">plewis@enotrans.org</a></td>
<td>Jurek Grabowski <a href="mailto:jgrabowski@aaafoundation.org">jgrabowski@aaafoundation.org</a></td>
<td>Robert Poole <a href="mailto:bob.poole@reason.org">bob.poole@reason.org</a></td>
<td>Todd Litman <a href="mailto:litman@vti.org">litman@vti.org</a></td>
</tr>
</tbody>
</table>

N/A = Not available
REQUESTS FOR PROPOSALS

1. City Transportation Plan
Agency: City of Charleston, SC
Deadline: March 24, 2016 at 12:00 pm
Contact: Robin Barrett-Robinson, email: robinsonr@charleston-sc.gov
Website: http://www.charleston-sc.gov/bids.aspx?bidId=D=196
Description: The City of Charleston will develop a new comprehensive Citywide Transportation plan that will provide solutions as well as a long-range vision for Charleston’s transportation system aimed at improving mobility, mitigating traffic congestion, improving safety for pedestrians and vehicular traffic, and enhancement of transportation corridors. It is the City’s intention to integrate the essential information from various City and regional plans and studies to develop a highly visual and descriptive comprehensive transportation plan. The intent of the plan is to be broad in scope with some areas of specific detailed analyses for certain transportation components and enhancements of specific areas of the City. The transportation plan will be prepared to allow for updating every 3-5 years and it will incorporate the priorities of the City Council and provide direction to City officials and staff, residents, businesses, and the development industry in order to implement the City’s vision.

2. Research for the AASHTO Standing Committee on Public Transportation
Agency: Transportation Research Board
Deadline: April 28, 2016
Contact: Gwen Chisholm-Smith, Tel. (202) 334-3246, Email: gsmith@nas.edu
Website: http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4149
Description: NCHRP 20-65B [RFP] Research for the AASHTO Standing Committee on Public Transportation
Funds: $450,000
Funding for individual studies will be allocated by the NCHRP Panel. Future year funding will be determined in the context of total NCHRP funding decisions. Individual studies will typically be in the range of $50,000 to $100,000 and between 6 and 12 months in duration.
The objective of NCHRP Project 20-65 is to provide flexible, ongoing, quick-response research on public transportation issues in support of AASHTO Standing Committee on Public Transportation (SCOPT) activities. This research is designed to develop improvements to analytical methods, decision-support tools, procedures, and techniques employed by practitioners addressing public transportation issues.
Depending on the nature of the research, assistance may be secured through various mechanisms, including: sole source contracts; standard Request For Proposals (RFP) solicitations for larger, more complex projects; or task-order contracts. This request for statements of qualifications and availability will be used to establish at least two task-order contracts to undertake studies in FY 2016 through FY 2019.
The selected task-order contractors will be asked to prepare proposals (i.e., a brief research plan and budget) to carry out studies selected by the NCHRP 20-65 Panel and approved by the AASHTO SCOPT. The proposals will be used to determine which team will be awarded the study under the task-order contract.

3. Comprehensive Operational Analysis
Agency: River Valley Metro Mass Transit District
Deadline: April 4, 2016
Contact: Lois Bentley, E-mail: lbentley@rivervalleymetro.com, Tel. (815) 935-1403
Description: Comprehensive Operational Analysis RFP/16-01
River Valley Metro Mass Transit District (RVMMTD) is soliciting proposals from consultants with qualifications, experience & knowledge to provide Comprehensive Operational Analysis (COA) Services.
Proposal Due Date: 12:00 p.m. local time on April 4, 2016.

4. Help Improve Public Transportation
Agency: TransitCenter
Deadline: April 15, 2016
Contact: Kyle Moler, (202) 478-6173, Email: kmoler@mrrs.com.
Website: www.transitcenter.org/grants
Description: TransitCenter Announces Open Call for Grant Proposals to Help Improve Public Transportation. TransitCenter, a national foundation committed to improving urban mobility, announced an open call for grant proposals to help localities improve public transportation. The call for proposals builds on last year’s program, which resulted in nine major awards totaling over $800,000 granted to a range of organizations contributing original new work to the field.
This year’s grants will be awarded in the amount of $50,000 - $150,000 depending on the scope of the project. Any U.S. organization is eligible, and transit agencies and civic organizations new to transit advocacy are especially encouraged to apply.
Interested parties must submit a letter of interest by 11:59 pm ET on April 15, 2016. Applicants selected to submit full proposals will be notified by June 1, and final proposals are due by August 1.
Guidelines and Requirements
TransitCenter is looking for fresh ideas that offer pragmatic solutions for real-world improvements, projects that are multi-modal and offer an opportunity to form partnerships that reach across sectors and across agencies.
Creativity is encouraged, but final proposals must fit into one of three focus areas: Leadership and Governance; Riders and Technology; or Demand and Opinion.

5. Portland – Bayside Transportation Master Plan RFP
Agency: Portland Area Comprehensive Transportation System (PACTS)
Deadline: March 20, 2015
Contact: N/A
Description: The Portland Area Comprehensive Transportation System (PACTS), as the federally designated Metropolitan Planning Organization (MPO) for the Portland, Maine Urbanized Area, and its member municipality of the City of Portland, request proposals from qualified consulting teams to evaluate multi-modal transportation needs in the Bayside neighborhood. Teams should be comprised of transportation planners, with experience adapting an automobile centric urban environment for bus transit, pedestrian and bicycle transportation, include urban designers, and experience with public facilitation to carry out FHWA-funded services.

PUBLIC AGENCIES — RFP notices are published here FREE OF CHARGE — call (703)764-0312 for details and deadline.
## CONFERENCES

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<tr>
<th>DATES</th>
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<tr>
<td>Jan. 10-14</td>
<td>Transportation Research Board’s 95th Annual Meeting</td>
<td>Washington, DC</td>
<td>Walter E. Washington Convention Center</td>
<td>This program is expected to attract more than 12,000 transportation professionals from around the world. The meeting program will cover all transportation modes, with more than 5,000 presentations in nearly 750 sessions and workshops addressing topics of interest to all attendees—policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions. A number of sessions and workshops will focus on the spotlight theme for the 2016 TRB Annual Meeting, Research Convergence for a Multi-Modal Future.</td>
<td><a href="http://www.trb.org/AnnualMeeting/AnnualMeeting.aspx">http://www.trb.org/AnnualMeeting/AnnualMeeting.aspx</a></td>
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<tr>
<td>Jan. 29-Feb. 2</td>
<td>American Traffic Safety Services Association Annual Convention and Traffic Expo</td>
<td>New Orleans, LA</td>
<td>N/A</td>
<td>ATSSA’s 46th Annual Convention &amp; Traffic Expo is the premier event for more than 3,000 roadway safety professionals and transportation officials from across the USA and around the globe. Celebrating its 46th year, the convention brings together business leaders, government officials, manufacturers, corporate roadway department personnel and all manner of people involved in nearly every aspect of roadway safety.</td>
<td><a href="http://expo.atssa.com/">http://expo.atssa.com/</a></td>
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<tr>
<td>Feb. 23-26</td>
<td>American Association of State Highway and Transportation Officials 2016 Legislative Briefing</td>
<td>Washington, DC</td>
<td>Washington Court Hotel</td>
<td>The AASHTO Legislative Briefing provides valuable insights and information for members to take to their respective congressional delegation as well as back home to their state officials and constituents. Meetings give important access to the people working with the Administration and Congress on issues that impact state departments of transportation. The conference serves as a unique experience that combines access with information.</td>
<td><a href="http://mmad.transportation.org/meetings_registration/">http://mmad.transportation.org/meetings_registration/</a></td>
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<tr>
<td>April 18-21</td>
<td>6th European Transport Research Conference, sponsored by the Transport Research Arena</td>
<td>Warsaw, Poland</td>
<td>National Stadium</td>
<td>The theme of this biennial conference is “Moving Forward: Innovative Solutions for Tomorrow’s Mobility.” TRA2016 Conference will contribute to innovation in sustainable mobility for Europe, by bringing together all the stakeholders of the transport system. It seeks to reflect the multidisciplinary nature of the transport sector and, for this reason, addresses all stakeholders in both the public and private sectors and all professionals, regardless of their roles (researchers, practitioners, designers, constructors, operators, administrators, policy makers etc.).</td>
<td><a href="http://www.traconference.eu/">http://www.traconference.eu/</a></td>
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<tr>
<td>April 18-20</td>
<td>Design-Build In Transportation</td>
<td>Charlotte, NC</td>
<td>Charlotte Convention Center</td>
<td>Network with all the major players and design-build teams who will be in attendance, Reach Public and Private Owners and the entire Design-Build Team: •Chief Engineers, Purchasing, Contracts, and other key officials from State DOTs, and the Federal Highway Administration, plus from Bridge, Toll, Rapid Transit, Rail, Port, and Airport Authorities A high percentage of owner attendees from all segments of the transportation industry, including representation from over 80% of the state Departments of Transportation. All the major players who deliver major civil infrastructure projects •Senior Level Executives – Consulting and Environmental, Civil, Bridge, Transportation, Safety, Quality, and Cost Engineers, Designers, Airport and Port Officials, Planners, Contractors, Specialists, and Solution Providers</td>
<td><a href="https://www.dbtranspo.com/">https://www.dbtranspo.com/</a></td>
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N/A = Not Available; m = member; nm = non-member. To list your transportation conferences here FREE, send all information as above to: The UTM Conference Dept., P.O. Box 12300, Burke, VA 22009-2300, or call (703) 764-0512, or fax (703) 764-0516, or email: editors@lawleypublications.com.
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<td>April 23-24</td>
<td>Transit Vehicle Technology and Their Impact on Sustainable Transport TVT 2016</td>
<td>Rome, Italy</td>
<td>N/A</td>
<td>The workshop will showcase various transit vehicle technologies and operations that have significant impact on the sustainable development of urban environment. The occasion will bring together researchers, practitioners, and decision makers from all over the world to explore the interaction between transportation, especially urban transit, and nature and built environment, energy consumption and society values.</td>
<td><a href="http://www.vehits.org">www.vehits.org</a></td>
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<tr>
<td>May 1-4</td>
<td>6th Transportation Research Board Conference on Innovations in Travel Modeling</td>
<td>Denver, CO</td>
<td>N/A</td>
<td>The event will facilitate sharing information and experiences on current models and modeling research. The conference will also explore the integration of social factors, land-use, transportation supply, and technology into the modeling process.</td>
<td><a href="http://www.trb.org/Calendar/Blurbs/172989.aspx">http://www.trb.org/Calendar/Blurbs/172989.aspx</a></td>
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<tr>
<td>May 1-4</td>
<td>North American Travel Monitoring Exposition and Conference</td>
<td>Miami, FL</td>
<td>Hyatt Regency, Miami</td>
<td>North American Travel Monitoring Exposition and Conference (NATMEC) provides an opportunity for traffic monitoring professionals to exchange and share information related to the collection, management, and use of monitored traffic data in all applications. Attendees will be able to network with local, state, and federal representatives; industry representatives; and vendors of equipment and software. NATMEC is the premier venue for sharing experiences on effectively monitoring traffic flow, whether for operational decision making, planning, or program or performance management.</td>
<td><a href="http://www.cvent.com/events/natmec-improving-traffic-data-collection-analysis-and-use/event-summary-1dbfb7aad4c1848939d04579344615323.aspx">http://www.cvent.com/events/natmec-improving-traffic-data-collection-analysis-and-use/event-summary-1dbfb7aad4c1848939d04579344615323.aspx</a></td>
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<tr>
<td>May 4-6</td>
<td>15th Transportation Research Board International Conference on Managed Lanes</td>
<td>Miami, FL</td>
<td>N/A</td>
<td>The workshop explores planning, design, and operations of managed lanes as well as emerging research needs related to integrating managed lanes into the transportation system.</td>
<td><a href="http://www.trb.org/Calendar/Blurbs/172007.aspx">http://www.trb.org/Calendar/Blurbs/172007.aspx</a></td>
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<tr>
<td>May 17-19</td>
<td>Transportation Research Board co-sponsors Road Safety on Five Continents</td>
<td>Rio de Janeiro, Brazil</td>
<td>N/A</td>
<td>The conference provides an international platform to exchange knowledge on road safety and safe mobility. This conference will focus on safety and health associated with road transportation.</td>
<td><a href="http://www.trb.org/Calendar/Blurbs/172451.aspx">http://www.trb.org/Calendar/Blurbs/172451.aspx</a></td>
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<tr>
<td>May 22-25</td>
<td>International Parking Institute (IPI) Conference and Expo</td>
<td>Nashville, TN</td>
<td>N/A</td>
<td>The IPI Conference and Expo is the largest educational and networking event for parking and transportation professionals in the world. Traditionally, more than 2,800 attendees gather for the four days for meetings, keynotes, leadership discussions, networking awards, special events, tours of parking facilities and an exhibit hall with more than 235 exhibitors.</td>
<td><a href="http://www.parking.org/meetings-events/ipi-conference-expo.aspx">http://www.parking.org/meetings-events/ipi-conference-expo.aspx</a></td>
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<tr>
<td>May 24-26</td>
<td>American Association of State Highway and Transportation Officials Spring Meeting</td>
<td>Des Moines, IA</td>
<td>Des Moines Marriott</td>
<td>The AASHTO Annual Spring Meeting offers transportation executives the opportunity to network and share the latest in industry policies and innovations. Hosted by the home state of the AASHTO President, this meeting includes informational sessions on relevant industry topics.</td>
<td><a href="http://mmsd.transportation.org/meetings-registration/">http://mmsd.transportation.org/meetings-registration/</a></td>
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<tr>
<td>June 1-2</td>
<td>International Scientific Conference on Mobility and Transport</td>
<td>Munich, Germany</td>
<td>Oskar von Miller Forum</td>
<td>The mobil.TUM 2016 serves as a platform for practitioners and researchers to meet and exchange their observations, experiences, and explanations. International keynote speakers will animate the debate on core ideas and theories. The meeting aims to provide inspiration for future research directions and the implementation of successful solutions for sustainable urban mobility.</td>
<td><a href="http://www.mobil-tum.vt.bgu.tum.de/home/">http://www.mobil-tum.vt.bgu.tum.de/home/</a></td>
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<tr>
<td>June 14-16</td>
<td>2016 International Symposium on Enhancing Highway Performance: 7th International Symposium on Highway Capacity and Quality of Service; 3rd International Symposium on Freeway and Tollway Operations</td>
<td>Berlin, Germany</td>
<td>N/A</td>
<td>The symposium will focus on the latest research and international improvements in highway and transportation capacity, quality of service, and freeway and tollway operations. The symposium is co-sponsored by the Transportation Research Board.</td>
<td><a href="http://www.trb.org/Calendar/Blurbs/171256.aspx">http://www.trb.org/Calendar/Blurbs/171256.aspx</a></td>
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<tr>
<td>June 26-29</td>
<td>American Society of Civil Engineers 2016 International Conference on Transportation and Development</td>
<td>Houston, TX</td>
<td>N/A</td>
<td>The conference co-sponsored by the Transportation Research Board will enable attendees from around the world to discuss transportation and development projects ranging from airports to rail to highways and multi-modal facilities. The conference will consider all aspects of development from planning through design and construction to operations.</td>
<td><a href="http://www.trb.org/Calendar/Blurbse172452.aspx">http://www.trb.org/Calendar/Blurbse172452.aspx</a></td>
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<tr>
<td>June 26-29</td>
<td>2016 Western Association of State Highway and Transportation Officials (WASHTO) Annual Meeting</td>
<td>Laramie, WY</td>
<td>N/A</td>
<td>The Western Association of State Highway and Transportation Officials holds its annual meeting.</td>
<td><a href="http://www.washto.org">www.washto.org</a></td>
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<tr>
<td>July 11-12</td>
<td>11th National Conference on Transportation Asset Management, organized by the Transportation Research Board</td>
<td>Minneapolis, MN</td>
<td>N/A</td>
<td>The conference is expected to cover a broad range of topics on surface transportation modes of interest to agencies in the early stages of implementation of asset management as well as agencies that are in later stages of the implementation process.</td>
<td><a href="http://www.trb.org/Calendar/Blurbse171403.aspx">http://www.trb.org/Calendar/Blurbse171403.aspx</a></td>
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<tr>
<td>July 22-25</td>
<td>National Association of Counties (NACo) Annual Conference and Exposition</td>
<td>Long Beach, CA</td>
<td>N/A</td>
<td>The Annual Conference provides county officials with a great opportunity to vote on NACo's policies related to federal legislation and regulation; elect officers; network with colleagues; learn about innovative county programs; find out about issues impacting counties across the country; and view products and services from participating companies and exhibitors.</td>
<td><a href="http://www.naco.org/events/nacos-81st-annual-conference-exposition">http://www.naco.org/events/nacos-81st-annual-conference-exposition</a></td>
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</table>
| Sept. 11-14 | American Public Transportation Association’s Annual Meeting                              | Los Angeles, CA | N/A        | The American Public Transportation Association holds its annual meeting. | http://www.apta.com/mc/Pages/Future.asp | x
| Sept. 12-15 | “Pro Walk-Pro Bike-Pro Place” Conference                                               | Vancouver, Canada | N/A        | The premier conference in North America for walking and bicycling professionals from the public and private sectors. The 19th Pro Walk/Pro Bike/Pro Place in Vancouver is expected to draw 1,000 city planners, transportation engineers, public health advocates, elected officials, community leaders, and professional walking and bicycling advocates. | http://www.pps.org/walkbikeplaces2016/ |

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