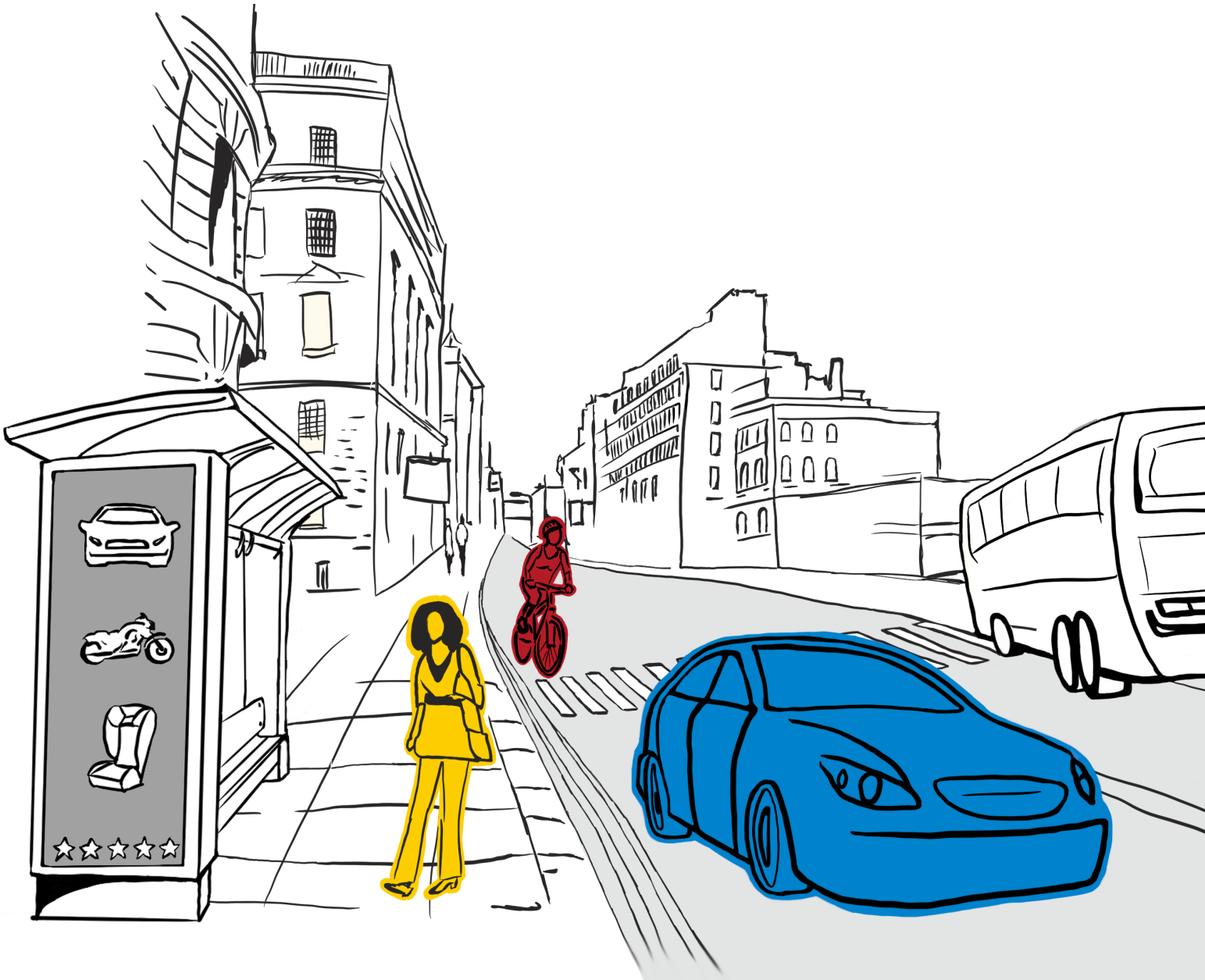
THE ROAD AHEAD

National Highway Traffic Safety Administration Strategic Plan
2016—2020



U.S. Department of Transportation
National Highway Traffic Safety Administration

NHTSA

Contents

Mission

Save lives, prevent injuries, and reduce economic costs due to road traffic crashes through education, research, safety standards, and enforcement activity.

Vision

Eliminate traffic fatalities and major injuries on the Nation's roadways.

Core Values

Leadership

NHTSA leads through the development of innovative approaches to highway and vehicle safety driven by data and sound science.

Innovation

NHTSA fosters innovation in the development and delivery of highway and vehicle safety programs and policies, as well as internal operations.

Transparency

NHTSA is committed to appropriately sharing non-proprietary information with stakeholders to improve communications and accountability.

Service

NHTSA delivers outstanding service, internally and externally, through mutual respect, collaboration, and accessibility.

TWO VERY IMPORTANT NUMBERS:

35,092

In 2015, 35,092 people lost their lives on our roads, a 7.2-percent increase over 2014. Those aren't just numbers. These were our children, parents, spouses, friends, neighbors, and colleagues. They were somebody's everything.

94

That's the percentage of crashes caused by human choice or error. That's a fatal decision to get behind the wheel after drinking. It's the decision to speed through an intersection as a light is changing, or the inability to brake fast enough to avoid the person who just sped through. It's the decision to drive after a sleepless night or to send one more text from behind the wheel to let someone know you're on your way.

Message From the Administrator

At the National Highway Traffic Safety Administration (NHTSA), where our mission is to save lives on American roads, we often talk about two very important numbers: 35,092 and 94.

In 2015, 35,092 people lost their lives on our roads, a 7.2-percent increase over 2014. Those aren't just numbers. These were our children, parents, spouses, friends, neighbors, and colleagues. They were somebody's everything.

The second number is 94. That's the percentage of crashes caused by human choice or error. That's a fatal decision to get behind the wheel after drinking. It's the decision to speed through an intersection as a light is changing, or the inability to brake fast enough to avoid the person who just sped through. It's the decision to drive after a sleepless night or to send one more text from behind the wheel to let someone know you're on your way.

These two numbers are a call to action, because, frankly, at NHTSA we are working to create a future where no one dies on our roads. How then, do we get to zero fatalities from a near-term record high? We know we can't do more of the same and expect a different result. This plan is our renewed commitment to our many successful safety programs, and our dedication to finding innovative tools that save lives.

In January 2016, we announced the Proactive Safety Principles, a historic agreement between the U.S. Department of Transportation, NHTSA, and 18 automakers on a set of broad-ranging actions to help avoid the type of safety crisis that led to record-setting safety recalls. This approach is already yielding results and we're excited about its future potential.

We also embrace the lifesaving potential of automated vehicle technologies. Too often we talk about a tension between safety and innovation. A study we did showed that over 50 years, basic safety technologies such as seat belts and air bags saved 613,501 lives. Yet those technologies were also once controversial.

On September 20, 2016, the U.S. DOT and NHTSA announced the Federal Automated Vehicles Policy, a proactive, four-part measure designed to help facilitate the safe testing and deployment of automated vehicles nationwide. This approach is an unprecedented move by the Federal Government to harness the enormous safety and mobility potential of these technologies, maintaining oversight and authority, while allowing innovators to develop bold new safety and mobility solutions.

However, we can't wait until that revolution is here to address the toughest challenge in front of us: the 94 percent of crashes caused by human choice or error. We seek new strategies and new partners to help people make the right choices on the road. This fall, we convened a behavioral safety summit to lay out a roadmap to deal with issues like impaired driving, distracted and drowsy driving, and speeding.

Transportation touches every part of our lives, and the solutions to the challenges we face must likewise come from all of us. I'm confident that with NHTSA's mission-driven staff and our many dedicated stakeholders, we can make a real difference in all of our lives in the years to come.

Mark R. Rosekind, Ph.D.
Administrator

Executive Summary

The National Highway Traffic Safety Administration (NHTSA) is responsible for reducing injuries and fatalities on the Nation's roadways. This strategic plan, covering 2016 – 2020, renews our commitment to our safety mission, while outlining innovative strategies to move the Nation down the road toward eliminating roadway fatalities altogether.

We are adopting five strategic goals that illustrate our commitment to improving roadway safety, and boldly pursue our vision of eliminating fatalities. These goals aresupported by measurable strategies to reach our safety objectives.

Safety is and will always be NHTSA's mission and primary goal. We will pursue proactive safety and the use of advanced safety technology as new tools to prevent crashes from occurring. With driver choice or error accounting for 94 percent of all crashes, however, we must seek new ways to improve driver and other road-user behaviors. We are committed to exploring new partnerships and tools to augment our proven safety programs to meet the challenges we face.

Lastly, we will continue to focus on improving our internal processes by improving data collection and critical information technology infrastructure to help us work smarter and more effectively with our resources. By employing strategies to attract and retain the brightest minds in transportation safety to enhance NHTSA's dedicated staff, we can lead the Nation down the road toward eliminating roadway fatalities.

NHTSA Strategic Goals and Objectives 2016—2020

Strategic Goal	Strategic Objectives
Safety	› Reduce Fatalities and Injuries › Increase Survivability From Crashes › Reduce Economic Costs
Proactive Vehicle Safety	› Promote the Proactive Safety Principles › Enhance ODI › Conduct Campaigns To Improve Recall Completion Rates › Inform and Empower Consumers › Coordinate Global Road Safety
Automated Vehicles	› Safely Deploy Highly Automated Vehicles › Safely Deploy V2V Communications › Enable a Robust, Layered Framework for Vehicle Cybersecurity
Human Choices	› Promote Innovative Solutions for Behavioral Safety › Leverage Law Enforcement Partnerships › Provide Oversight and Guidance to State Highway Safety Offices
Organizational Excellence	› Improve NHTSA's Ability To Deliver Quality Data and Analysis › Strengthen Mission Critical Information Technology › Properly Identify Human Capital Needs › Improve Financial Performance

Figure 1. NHTSA Strategic Goals and Objectives 2016—2020

Introduction

The National Highway Traffic Safety Administration (NHTSA) was established by the Highway Safety Act of 1970 as an agency within the U.S. Department of Transportation to carry out highway safety programs previously administered by the National Highway Safety Bureau.

We are responsible for reducing deaths, injuries, and economic losses resulting from motor vehicle crashes. We do this by setting and enforcing safety performance standards for motor vehicles and equipment, identifying safety defects, and through the development and delivery of effective highway safety programs for State and local jurisdictions.

Since NHTSA's creation, the rate of fatalities due to highway crashes has dramatically and steadily declined, making our roadways safer than they have ever been. However, every year, tens of thousands of Americans still die, and millions more are injured due to motor vehicle crashes, making such crashes a leading cause of death in the United States. The toll of these preventable crashes is devastating emotionally and drains our economy of $242 billion annually.[1]

In 2015, an estimated 35,092 people lost their lives on our Nation's roadways, an 7.2-percent increase over 2014. While the increase coincides with lower gas prices and an improved economy, both typical indicators of increased discretionary driving, we know that 94 percent of crashes are due to human choice or error. This plan is our call to action, and outlines the innovative partnerships and strategies that NHTSA will use in addition to its core programs to achieve our mission, and further the nation down the road to eliminating traffic fatalities. It covers 2016-2020, and aligns with the 2014-2018 U.S. DOT Strategic Plan.

[1] www-nrd.nhtsa.dot.gov/Pubs/812013.pdf

Planning Process

Strengths, Weaknesses, Opportunities, Threats

As we developed the plan, we organized several internal workgroups to conduct an analysis to determine our Strengths, Weaknesses, Opportunities, and Threats (SWOT). This standard strategic planning exercise forces an organization to identify the various SWOT elements and to chart a path to leverage its strengths, address its internal weaknesses, pursue external opportunities, and mitigate potential threats. This activity enabled us to identify areas of strategic change and growth.

The SWOT analysis allows us to leverage our Strengths into Opportunities as they arise. By identifying Weaknesses and Threats, we can strategically transform them into Strengths and Opportunities, thus mitigating their impact on our programs.

SWOT Analysis Matrix

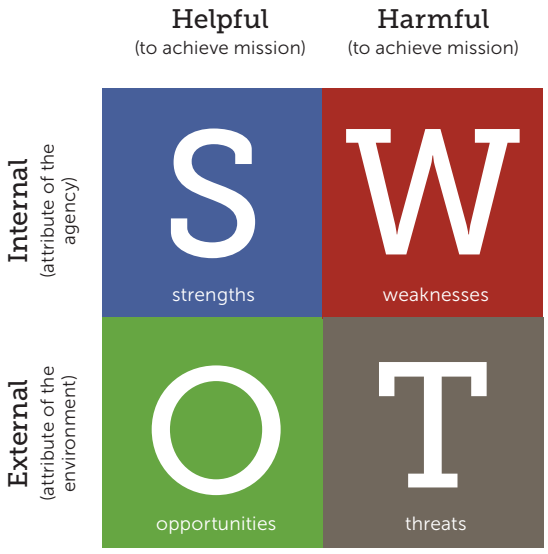


Figure 2. SWOT Analysis Matrix

Public Input

In addition to internal planning, we opened two dockets for public comment during the strategic planning process, and held a public meeting in February 2014. Additionally, comments and ideas informally generated through NHTSA's many public forums informed, and continue to inform, our planning. These include:

- Retooling Recalls: Getting to 100% (April 28, 2015)
- Cognitive Distraction: What Were You Thinking? (May 12, 2015)
- School Bus Occupant Protection: Taking Safety to a New Level (July 23, 2015)
- Asleep at the Wheel: A Nation of Drowsy Drivers (November 4-5, 2015)
- Public Hearings on Planned Upgrades to the New Car Assessment Program (January 14 and 29, 2016)
- NHTSA Vehicle Cybersecurity Roundtable (January 19, 2016)
- Driving Behavioral Change in Traffic Safety (5 Regional meetings February and March 2016, and National meetings March 10-11, 2016)
- Public Hearings on NHTSA Automated Vehicle Operational Guidance (April 8 and 27, 2016)

Data-Driven, Science-Based Approach

Data is the foundation for all of NHTSA's programs. We collect nationally representative crash data from a number of sources, such as the Fatality Analysis Report System (FARS) and the General Estimates System (GES), in addition to research studies on specific issues, such as that gathered through the National Roadside Survey of Alcohol and Drug Use by Drivers. We use this data to identify the nature, causes, and injury outcomes of crashes in order to analyze trends, and develop countermeasures to mitigate crashes. This allows us to marshal limited resources to develop the programs, policies and regulations that can have the greatest impact and save the most lives.

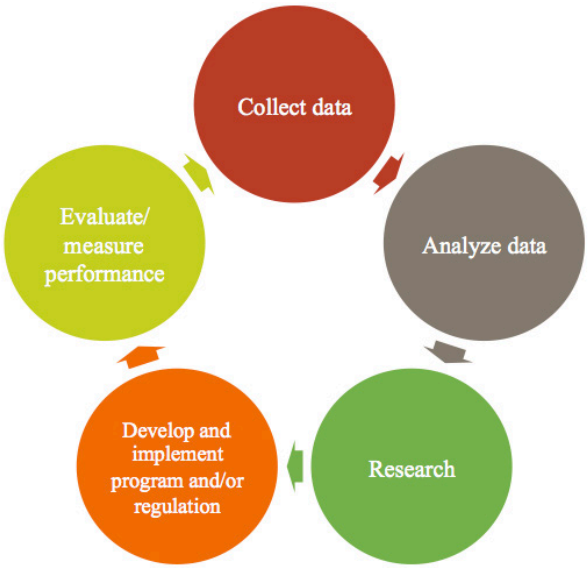


Figure 3. NHTSA's Data-Driven, Science-Based Approach

After analyzing the data, we conduct research to develop and implement safety programs, campaigns and/or vehicle regulations to address and mitigate the primary factors leading to crashes and fatalities. We work with various Federal, State and local entities, vehicle manufacturers, safety advocates, and many others to develop and deliver safety programs, regulations, and campaigns. These countermeasures are evaluated to make sure that they are effective in addressing the behavioral or vehicle safety issues the data presented. This cycle allows the agency to make continuous improvements to lifesaving programs.

Mission, Vision, and the Three Lanes On the Road to Zero Fatalities

We are known as a mission-driven organization, with a lean cadre of employees dedicated to its many successful lifesaving programs. Yet, as successful as those programs have been, after years of steady, hard-won reductions in fatalities, in 2015 fatalities showed show a significant 7.2-percent increase over 2014.

In every organization, it's necessary to constantly correct course, which is only possible with a clear vision of the future. Our vision is bold: Eliminate traffic fatalities and major injuries on the Nation's roadways. Achieving it will not happen overnight, but our lifesaving mission is too important to maintain the status quo. On the next page are the strategies that lay the groundwork for our Threes Lanes on the Road to Zero. In addition to our core safety programs, these priority programs will focus on improving proactive vehicle safety, promoting advanced safety technologies, and finding innovative ways to promote safe choices and reduce human error.

Three Lanes on NHTSA's Road to Zero

Proactive Vehicle Safety

- Proactive Safety Principles
- ODI Enhancements
- Improve Recall Completion Rates
- Inform and Empower Consumers
- New Car Assessment Program (NCAP) Upgrades
- Global Road Safety

Advanced Safety Technology

- Highly Automated Vehicles
- Vehicle-to-Vehicle Communications
- Democratize Safety Technology
- Automated Emergency Braking (AEB)
- Driver Alcohol Detection System for Safety (DADSS)
- Cybersecurity

Human Choices

- Innovative Solutions
- Leverage Law Enforcement
- Guidance and Oversight for State Highway Safety Programs

Strategic Goal 1: Safety

Safety is NHTSA's top priority. We are the lead agency for traffic safety in the United States, with the mission to save lives, prevent injuries, and reduce economic costs due to roadway crashes through education, research, safety standards, and enforcement activities.

In 1969, Dr. William Haddon, NHTSA's first administrator, introduced the Haddon Matrix. The Matrix identifies the factors involved in crashes, from the pre-crash phase, to the crash and post-crash phases, and how drivers, vehicles and the environment influence the outcomes of each. The Haddon Matrix embodies the core elements of our historic efforts to reduce traffic injuries and fatalities by using data to identify traffic safety issues and employ countermeasures to target those issues.

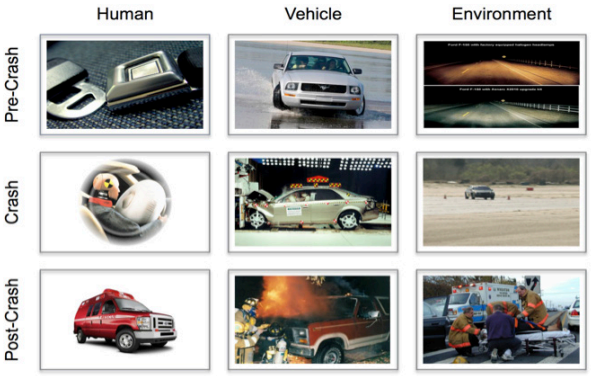


Figure 4. Haddon Matrix

Today, the lines of the Haddon Matrix are blurred, as advancements in technology and cultural thinking hurdle us into a new transportation era where crashes can be prevented from ever occurring. We remain firmly committed to our safety mission. Our approach will be innovative

and proactive, and leverage new technology to address the behavioral factors that account for 94 percent of all motor vehicle crashes.

To truly strive toward eliminating fatalities on our roadways, equal focus must be placed on drivers and other road users in addition to vehicles. While we are poised on a bold new era of automated safety technology that may someday eliminate driver error, we are still faced with the fact that 94 percent of all crashes are caused by human factors. In the years and decades ahead, we will need to deftly use all of the tools at hand, rapidly identify new ones, and transition to the safe deployment of highly automated vehicles as we strive toward eliminating fatalities on the Nation's roadways altogether.

Objective 1: Reduce Fatalities and Injuries

Since reaching a near-term high in 2005, there was an unprecedented decline in traffic fatalities and the fatality rate. The number of fatalities dropped 25 percent over the next decade, and in 2014, the fatality rate of 1.08 per 100 million vehicle miles traveled (VMT) was the lowest on record. This is a result of our efforts to ensure safer vehicles through the development of vehicle safety standards, and by delivering programs that promote safe behaviors by all road users.

However, 2015 sounded a bleak wake-up call: 35,092 people lost their lives on our roadways, an increase of 7.2 percent over 2014's record-low number of traffic fatalities. And the data reminds us that three persistent facts remain in traffic safety:

- Forty-eight percent of passenger vehicle occupants killed in crashes are unbelted;
- Twenty-nine percent of highway fatalities involve impaired driving; and
- Ninety-four percent of crashes involve an element of human error.

This is why we will continue to strengthen core safety programs while boldly seeking new partners and new strategies to affect change in order to reverse the increase in fatalities in 2015, and then seek to eliminate fatalities on our roadways altogether.

Traffic safety is a complex responsibility shared by many partners, and it requires a multi-disciplinary approach. We work closely with Federal, State, tribal and local partners, along with industry, safety advocates, law enforcement, public health agencies, and many others to accomplish NHTSA's goals. The Agency provides grants to States and local governments vital to the success of our behavioral and data programs. These partnerships help develop and enforce laws against drunk and distracted driving, technical assistance on graduated driver licensing and other safety issues, and to support a wide range of activities that save lives.

Strategy: Reduce Impaired Driving

Nearly one-third of traffic fatalities each year occur in crashes that involve an impaired driver (in which a driver or motorcycle rider had a blood alcohol concentration [BAC] of .08 or greater). Approximately one-third of impaired driving offenders are subsequently re-arrested for impaired driving. Therefore, appropriate sentencing and supervision are critically important to reducing impaired driving

incidents. However, according to Fatality Analysis Reporting System (FARS) data, the majority of impaired drivers involved in fatal crashes had not previously been convicted of impaired driving (during the last three years). Therefore, in addition to addressing recidivism, effective prevention and intervention strategies also are necessary. Since impaired driving systems are complex and involve many interrelated elements, States must consider a comprehensive and strategic approach to their countermeasure development and implementation.

With the legalization of marijuana in several States, comprehensive research in the area of drug-impaired driving is especially urgent as additional States consider legalization of marijuana use. NHTSA plans to conduct research to improve the understanding of the magnitude of the drug-impaired-driving problem so that States can appropriately scale and target countermeasure activities, and complete a study on marijuana impaired driving as required by the Fixing America's Surface Transportation (FAST) Act of 2015. In this study, we will examine the effect of key State policy differences on the prevalence of marijuana use by drivers and will conduct a descriptive analysis of State policies to control the use of marijuana.

Strategy: Increase Occupant Protection Use

Wearing a seat belt is the single most effective means of saving lives and reducing injuries in crashes, and thankfully, seat belt use remains high across the Nation at 88.5 percent. National high-visibility enforcement campaigns, coupled with strong primary belt laws have made an immense impact on belt use. However, while seat belt use has increased since 2000, the fact remains that the nearly half of all fatalities are those of unrestrained occupants.

In order to make new strides in belt use, we have to reach audiences typically resistant to belt or child-restraint use. We will continue to work with law enforcement to address fatalities in States with secondary seat belt laws, States with primary enforcement laws and low belt use rates, and in suburban and rural areas where a significant portion of those killed in motor vehicle crashes are not restrained. Additionally, we will engage the public health and medical communities in developing messages and programs to increase the use of occupant protection, especially among hard-to-reach populations and resistant communities. We will also explore new way to increase belt use through new and accelerated technologies.

Objective 2: Increase Survivability From Crashes

Safe vehicles are a vital component of preventing roadway fatalities. NHTSA's vehicle safety research considers the entire spectrum of a crash to improve our understanding of the benefits of crash avoidance technologies, and ensuring occupant protection. In addition to choosing safer vehicles, drivers and passengers can also improve their survivability by adopting safe behaviors, such as wearing seat belts, avoiding driver distractions, and not driving impaired.

Additionally, advancing post-crash emergency response will save lives. The National Emergency Medical Services (EMS) community, other Federal agencies and State EMS offices rely upon NHTSA's EMS program for leadership and coordination in improving EMS functions and processes. Recent studies show that effective systems of emergency trauma care can improve survival from severe injuries by as much as 25 percent. Counties with coordinated systems for

trauma care have been shown to have crash fatality rates as much as 50 percent lower than counties without trauma systems.

For almost 50 years, the 911 system has provided efficient, effective public access to emergency help for all types of emergencies (i.e., crime, fire, medical emergencies, traffic crashes, natural disasters, acts of terrorism). Every incident, large or small, starts with a call to the 911 system for help. Unfortunately, while the 911 system has been a success, its infrastructure is incompatible with the methods of personal communications that we use today, such as smartphones. An update is planned to allow citizens to securely send text messages, video, photographs and other data to 911, and in turn allow 911 to send this and location information to emergency responders – something that isn't possible today. Data shows that the ability to accurately locate crash victims and quickly assess injury types greatly improves patient outcome.

Strategy: Improve Vehicle Crashworthiness

Crashworthiness is a vital component of vehicle safety that focuses on protecting occupants in the event of a crash. Making vehicles stronger and more stable, as well as ensuring occupants are secured and remain within the vehicle in the event of a crash helps reduce fatalities and injuries.

Crashworthiness research encompasses new and improved vehicle design, biomechanics and injury causation, field data collection and analysis of serious injury cases, safety countermeasures and vehicle equipment to enhance occupant safety. We develop and upgrade test procedures and devices, such as crash dummies, to evaluate the safety of motor vehicles and restraint systems for passenger vehicles, heavy trucks, school buses and motorcoaches.

We use a broad range of crash test dummies that have allowed us to drive improvements to occupant protection and vehicle safety over the years. As the vehicle fleet evolves, we are constantly gauging the impact of those changes on vehicle occupants in a crash scenario. We are developing test procedures with newer, more human-like dummies to improve our understanding of crash dynamics, particularly in frontal and side impact crashes. These new tests will allow us to develop test criteria and apply tools such as virtual modeling to improve safety for a wider range of occupants based on age, stature, gender, and those with vulnerabilities due to medical issues.

In coming years, we will also conduct feasibility studies on highly automated vehicles. We will explore occupant design issues, such as seating configuration, to explore what role this places on both crashworthiness and driver acceptance. We will also look at how such vehicles interact with other road users, such as pedestrians and bicyclists.

Strategy: Enforce Compliance With Vehicle Safety Standards

Our Vehicle Safety Compliance program develops and implements performance tests to help ensure the auto industry's compliance with the FMVSS, thus saving thousands of lives in recent years through crash protection and crash avoidance. NHTSA's tests and investigations help protect millions of consumers from the risks posed by noncompliant vehicles and items of equipment.

Strategy: Save Lives Through Improved Emergency Response

When crashes occur, the rapid response of trained emergency responders can mean the difference between life and death. NHTSA is the recognized national leader for the coordination and support of Federal efforts to improve prehospital EMS. A comprehensive EMS system is essential to highway traffic safety and to the health of the Nation; it provides the last opportunity to reduce fatalities and minimize injuries from motor vehicle crashes and other medical emergencies. Our EMS program provides essential leadership and coordination for developing a nationwide emergency medical services system.

The National 911 Program provides national leadership and coordination of comprehensive, data-driven and evidence-based Next Generation (NG) 911 systems to reduce fatalities and minimize injuries from motor vehicle crashes and other injuries. The program was created as a Federal point of coordination for activities among 911 stakeholders and to provide information that can be used by State and local 911 authorities to improve the 911 system. We work toward achieving these goals through collaboration with Federal agencies, national organizations, and 911 authorities at the State and local levels involved in 911 emergency communications. We develop a variety of resources with their active involvement, including tools that can be used to plan and implement Next Generation (NG) 911.

We are also committed to working toward the next generation of automatic collision notification (ACN). In the event of a traumatic crash, a patient's outcome greatly improves when they are routed to an appropriated trauma center as soon as possible. ACN technology has the potential to convey patient data in real time, from the vehicle to trauma centers, improving crash outcomes.

Objective 3: Reduce Economic Costs

Car crashes on our Nation's roadways cost $242 billion annually, including lost productivity, medical costs, legal and court costs, emergency service costs, insurance administration costs, congestion costs, property damage, and workplace losses. This represents $784 per person each year and 1.6 percent of the U.S. Gross Domestic Product.

Additionally, our efforts to improve fuel economy will also lead to economic savings. In July 2011, President Obama announced an historic agreement with 13 major automobile manufacturers to increase fuel economy standards each year from 2017 to 2025, which the Administration estimated would achieve 54.5 miles per gallon equivalent for cars and light-duty trucks by Model Year 2025, if all of the improvements are made with fuel-economy-increasing technologies.

Strategy: Improve Fuel Economy

U.S. DOT has set Corporate Average Fuel Economy (CAFE) standards since the late 1970s with the passage of the Energy Policy and Conservation Act of 1975 (EPCA). The CAFE program continues to play a key role in addressing the intertwined and critically important challenges of dependence on oil,

energy security and climate change facing the Nation. In the coming years, it's necessary that we maintain leadership in establishing national fuel economy standards for passenger and heavy vehicles, without adversely impacting vehicle safety.

In July 2016, the Environmental Protection Agency (EPA), DOT, NHTSA, and the California Air Resource Board (CARB) took the first step in the mid-term evaluation of the National Program for greenhouse gas emissions and fuel economy standards for light-duty cars and trucks by releasing a draft Technical Assessment Report (TAR) for public comment. The release of the TAR delivers on a commitment that EPA made in 2012 as part of the rulemaking establishing a National Program for the 2017-2025 period. The draft TAR covers model years 2022-2025.

The National Program is designed to let consumers to choose the car or truck they want, while ensuring that the vehicle also reduces carbon emissions and saves on fuel costs. The program will apply to passenger cars and light-duty trucks through model year 2025. It requires manufacturers to improve average fuel efficiency and reduce average greenhouse gas emissions over time. The National Program standards were projected by MY 2025 to double fuel economy and cut Green House Gas emissions in half, save 6 billion metric tons of carbon dioxide pollution and 12 billion barrels of oil over the lifetime of MY 2012-2025 vehicles, and deliver significant savings for consumers at the gas pump.

On August 16, 2016, EPA and NHTSA jointly finalized fuel economy standards for medium- and heavy-duty vehicles that will improve fuel efficiency and cut carbon pollution, while bolstering energy security and spurring manufacturing innovation. The final standards were called for by President Obama's Climate Action Plan, and respond to the President's directive in early 2014 to develop new standards that run into the next decade.

Heavy-duty trucks currently account for about 20 percent of GHG emissions and oil use in the U.S. transportation sector. Globally, GHG emissions from heavy-duty vehicles are growing rapidly and are expected to surpass emissions from passenger vehicles by 2030. The final standards are expected to lower CO2 emissions by approximately 1.1 billion metric tons, save vehicle owners fuel costs of about $170 billion, and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program. Overall, the program will provide $230 billion in net benefits to society including benefits to our climate and the public health of Americans, and addresses the second largest segment of U.S. transportation in terms of emission and energy use.

Strategy: Reduce Odometer Fraud

Odometer fraud often masks the actual condition of used vehicles, which increases the safety risks associated with their use and could hide the need for necessary safety maintenance and repairs. Strong enforcement of the Federal and State odometer laws through prosecutions with stiff sentences appears to be the most effective way to address the problem. NHTSA's criminal investigators conduct investigations of large-scale odometer fraud schemes and work closely with Department of Justice's Office of Consumer Litigation prosecutors to ensure that worthy cases are effectively prosecuted.

Since 1984, odometer fraud investigations have resulted in more than 273 criminal convictions in 36 States with prison sentences ranging from

1 month to 10 years, criminal fines totaling more than $3 million, and court ordered restitution totaling more than $16 million.

Strategy: Reduce Vehicle Theft

In 2014, there were 689,527 motor vehicles reported stolen in the United States—that's a vehicle stolen every 46 seconds. Nearly 45 percent of these vehicles are never recovered. The estimated total value of vehicles stolen nationwide is more than $4.5 billion. NHTSA publishes an annual report to identify vehicle and motor vehicle equipment thefts.

In January 2016, NHTSA published a notice for proposed rulemaking proposing an alternative method for manufacturers to obtain an exemption from the parts-marking requirements of the theft prevention standard, (49 CFR Part 541). This final rule amends the procedures for obtaining an exemption from the vehicle theft prevention standard for vehicles equipped with anti-theft devices by adding performance criteria for immobilizers.

The adoption of these performance criteria for immobilizers would bring the U.S. anti-theft requirements more in line with those of Canada and also support the harmonization initiatives being undertaken pursuant to ongoing bilateral regulatory cooperation efforts between the U.S. and Canada.

Performance Goals and Indicators for Safety

Strategic Goal: Safety

Performance Goal	Performance Indicators
Strategic Objective: Reduce Fatalities and Injuries	
Reduce number of impaired-driving fatalities	Reduced rate of impaired-driving fatalities (Government Performance and Results [GPRA] Modernization Act goal).
Increase seat belt use	Increased rate of belt use (GPRA goal/National Occupant Protection Use Survey [NOPUS]).
Increase use of child protective seats	Increased rate of child safety seats use (GPRA goal/NOPUS).
Strategic Objective: Increase Survivability From Crashes	
Lead the nationwide development, adoption of and evaluation of trauma-care evidence-based guidelines for EMS systems, including EMS guidelines for the Field Triage of Injured Patients.	By 2020, increase to 30, the number of States using Next Generation 911 (NG911) infrastructures to process 911 calls.
Improve EMS systems of care by adopting a meaningful national performance measure for trauma care.	By 2021, save an additional 500 lives by enhancing crash recognition, response, and emergency medical care.
Strategic Objective: Reduce Economic Costs	
Maintain the agency's leadership in establishing national fuel economy standards.	Issue Midterm Evaluation for Light-Duty Vehicle CAFE by 2018. Issue Medium-Heavy Truck Phase 2 by 2017.

Table 1. Performance Goals and Indicators for Safety

Strategic Goal 2: Proactive Vehicle Safety

The automotive industry has experienced several years of unprecedented recall activity, and we responded with unprecedented enforcement activity. We did this because it was best for public safety. However, the paradigm must change if we are to eliminate roadway fatalities in an age of automation.

We are rapidly accelerating into a new era of automotive safety. For more than a century, safety professionals held the assumption that cars would crash, and for that reason, focused their efforts on reducing the damage when it occurred. Today, we see a new possibility – the possibility that we can prevent those crashes from ever happening in the first place.

Highly automated vehicles hold amazing potential to save lives; however, it also demands our utmost trust in the vehicle that we are enabling to protect our most precious cargo. While we will continue to use all regulatory and enforcement tools at our disposal when they are needed, we are committed to working with vehicle and equipment manufacturers to make proactive safety the industry norm. Proactive safety allows for the identification of risk and remedy of design flaws before they are built. True safety is preventing tragedy from happening, not reacting after a tragedy.

Objective 1: Promote the Proactive Safety Principles

On January 15, 2016, U.S. DOT, NHTSA, and 18 manufacturers adopted a historic set of Proactive Safety Principles. Broadly, the group committed to improving the safety culture of the automobile industry by exploring a more effective dialog on cross-industry safety issues and trends to foster proactive safety solutions, and enhance timely, consistent issue identification. We remain committed to implementing and expanding these principles as way to improve vehicle safety.

Strategy: Enhance and Facilitate Proactive Safety

The first principle is, "Enhance and Facilitate Proactive Safety," in order to emphasize and actively encourage steady improvements in vehicle safety across the industry. The group is exploring how effective cross-industry communication on safety issues and trends can foster proactive safety solutions and enhance timely, consistent issue identification, building on existing tools, such as complaints and Early Warning Reporting (EWR) data.

Strategy: Enhance Analysis and Examination of EWR Data

The Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act of 2000 required us to prescribe rules requiring manufacturers to provide data and information designed to assist in the early detection and remedy of safety defects in vehicles. To better hone that tool for the benefit of proactive safety, we, along with the automobile manufacturers committed to forming an agency/industry working group to analyze the current EWR

data set, reporting, and use, and then explore enhancements, as well as the use of advanced analytics to improve risk-identification.

Additionally, we conducted an assessment of current industry reporting practices in order to identify inconsistencies and best practices across the industry. While additional improvements to EWR reporting may require future rulemaking, which is a lengthy process, we have established a timeline for annual review and update of agency guidance, incorporating emerging developments and newly identified trends. By providing regular guidance based on real-world, cross-industry data, we can make progressive improvements within the scope of our current regulatory authority.

Strategy: Maximize Safety Recall Participation Rates

Our vision is to achieve a 100-percent completion rate for every recall by improving communication at every level, at every step of the way. Yet, the current rate of completion can be much lower, leaving vehicles with potentially deadly safety defects on the road. On April 28, 2015, we hosted a day-long Retooling Recalls event that brought together leading transportation officials, automotive industry representatives, safety advocates, and researchers to examine how to increase unacceptably low recall completion rates.

Participation in this event in no small part led to heightened awareness that by working together and engaging non-traditional partners, industry could collaborate in an unprecedented way to improve recall completion rates. Through the Proactive Safety Principles, NHTSA and the auto industry have committed to identifying and implementing effective strategies to inform consumers of safety defects. We envision that these coordinated efforts will bolster our internal recall campaign efforts, as well as those of the manufacturers to improve completions rates.

Strategy: Enhance Automotive Cybersecurity

In an age where computers increasingly govern key decision-making in the driving environment, the cybersecurity of those computers is paramount to passenger safety. Electronic systems in a typical passenger car now control dozens of features, from entertainment and navigation to active safety applications like anti-lock brakes (ABS), electronic stability control (ESC), automatic emergency braking (AEB), and lane keeping assist (LKA). As these active safety technologies become increasingly automated, the cybersecurity of the electronic systems governing them is of the utmost importance.

In January 2016, the automotive industry, at our recommendation, stood up an information sharing and analysis center (ISAC) to identify and share vulnerabilities across the industry. The Auto-ISAC role is to coordinate the voluntary sharing of cybersecurity threats across the industry, as well as to enhancing it with common countermeasures over time. The Proactive Safety Principles show strong support of the Auto-ISAC, and we remain committed to providing proactive leadership to be ahead of, and eliminate, potential vehicle cybersecurity challenges. The Auto-ISAC released cyber security best practices for light-duty vehicles in July 2016, and NHTSA is also planning to release cyber security best practices for all vehicle manufacturers.

Objective 2: Retool Recalls

Our system for identifying and addressing defective vehicles came under intense scrutiny in 2014 with the GM ignition switch recall. Much of that scrutiny came from the outside – from Congress, the media, and safety advocates. We welcomed the constructive suggestions of those who share our dedication to saving lives. But we also scrutinized ourselves, and began to make changes to our processes and our partnerships in order to improve our recall program.

On April 28, 2015, we hosted a day-long workshop with leading transportation official, automotive industry, safety advocates, and researchers to examine ways to improve the recall completion rate across the country. This became starting a block for a year-long sprint that would lead to historic discussion about proactive safety, and would further improve our recall program in the future.

Strategy: Office of Defects Investigations Enhancements

While moving to protect the driving public by enforcing the 2014 GM ignition switch recall, we also looked inward to examine how to improve the structure, resources and processes within our Office of Defects Investigations (ODI). Since the GM recall, ODI has evolved to allow the agency to identify defects and trends earlier, despite a historic increase in consumer complaints and other data sources. In 2014, we began implementing the Corporate Information Factory (CIF) to integrate multiple databases that facilitate data mining across internal and external data sources. We continue to enhance the CIF, allowing ODI to use more sources of data to identify trends and detect unsafe vehicles and equipment earlier.

On June 5, 2015, U.S. DOT Secretary Anthony Foxx announced the release of two documents: one that outlined our investigation into the GM ignition switch recall and the changes NHTSA has adopted to strengthen our defect investigation work, and a comprehensive workforce assessment that detailed our optimal staffing needs to more effectively identify safety defects.

ODI is currently realigning its structure to enable ODI to identify and remedy issues earlier in the safety defect identification process.

Strategy: Conduct Campaigns to Improve Recall Completion Rates

In order to achieve our vision of a 100-percent completion rate for every recall, we are focused on improving communication at every level, at every step of the way. In January 2016, we launched our first ever national recalls campaign. The *Safe Cars Save Lives* campaign's main objective is to raise public awareness of the importance of finding out if your vehicle is under a recall and getting it fixed if it is.

The ad messages are very simple and clear: taking action on a safety recall keeps you and the ones you love safe. The campaign is highlighted with a national online advertising buy that directs consumers to a dedicated campaign page – Safercar.gov/checkforrecalls. The page encourages consumers to take one of two actions: use the VIN look-up tool or use the Make/Model search tool to check their vehicles for a recall. It also features NHTSA's Driven by Safety videos that educates consumers on a wide variety of safety subjects related to their vehicles as well as offers consumers the opportunity to sign up for e-mail alerts and to file a complaint

on their vehicles. As an off-shoot of this campaign, we launched the *Safe Cars Save Lives* bus tour from August 9-13, 2016, to spread the word about vehicle and passenger safety, taking a team of safety experts to the streets to talk to motorists about recalls, tires, car seats and heatstroke.

We are exploring new ways and new partnerships to achieve 100-percent completion. We will implement a two-year pilot program to evaluate the feasibility and effectiveness of an innovative State process for informing consumers of open recalls at the time of motor vehicle registration in the State. U.S. DOT proposed the pilot in its GROW AMERICA surface transportation reauthorization proposal and Congress included it in the Fixing America's Surface Transportation (FAST) Act.

As mentioned previously, we are working with industry, trade groups, and non-traditional partners as part of the Proactive Safety Principles to explore new ways to reach consumers about recalls and to develop and share best practices to improve recall completions.

Objective 3: Inform and Empower Consumers

Consumers play an invaluable role in creating a national traffic safety culture. Over the years, we have successfully proven that adopting safer behaviors on the road improves safety for everyone, but the consumer's role in creating safer vehicles is not as apparent. By highlighting their role in the development of safer motor vehicles and equipment, and encouraging safer driving behavior, we can empower them to become active partners in improving vehicle safety.

Similarly, we know that people make safer choices while driving, riding, and walking when they are educated about roadway dangers, and the countermeasures that can protect them. The success of our early campaigns, such as Vince and Larry's "You Can Learn A Lot From a Dummy," and "Buckle Up for Safety," are excellent examples of our pioneering work using communications to affect public health.

We provide reliable, timely, and accurate traffic safety information to the public, consumers, partners, and news organizations through an aggressive media and public education effort. This information reaches the public through a variety of medium including broadcast, digital, and print. But the general public is usually not aware of the agency by name. The lack of awareness and recognition can negatively impact our overall mission. For example, we rely on vehicle owners to report problems with their vehicle in order to identify vehicle defect trends. By increasing public awareness of NHTSA, we can improve defect data collection to support investigation activities. Additionally, public partners leverage our data resources and statistics that help us make policy and program decisions that improve road safety.

We have developed a robust communications program over the years, and effectively use a variety of available communications and media platforms to disseminate information. Social media is the newest channel to share research results and promote safety campaigns. We are actively engaged on Facebook, Twitter, Instagram and YouTube to share vehicle and

behavioral safety information with a wide audience. By increasing our use of social media, we raise the visibility of important traffic safety issues to new audiences. For example, we host live Twitter parties on hot topic issues and campaigns using hashtags such as #TheRightSeat, #CheckforBaby, #BuzzedDriving, #BuckleUpAmerica, and #CheckForRecalls. Techniques like these provide interaction between us and the communities we serve, and help consumers easily find traffic safety tips they can use to keep them and their loved ones safe.

Strategy: Improve the New Car Assessment Program

Since its inception, the New Car Assessment Program (NCAP) has proven highly effective; its success can not only be measured by the number of injuries prevented and lives saved, but in how consumers use NCAP star ratings to influence their vehicle purchasing decisions. When consumers select safer vehicles, vehicle manufacturers are incentivized to make safety improvements to new vehicles.

NCAP crash-tests new vehicles every year and currently rates them on how well they protect occupants in frontal, side and rollover crashes. Results from these tests are compiled into a rating of 1 to 5 stars, with more stars indicating a safer car. The vehicle safety ratings appear on window stickers of new cars, and searchable ratings are available on the agency's Safercar.gov website. The current program also includes a checklist of recommended advanced technology features, such as rear-visibility cameras, lane departure warning, and forward collision warning.

In recent years, it is clear that vehicle manufacturers are responding quickly to NCAP program enhancements by making additional safety improvements to their vehicles in order to earn top NCAP performance ratings and recommendations. Although it took nearly three decades for most vehicles to achieve the program's highest star rating of 5 stars for the original crash test, it has taken only a few years for manufacturers to achieve similar levels of safety performance for more recently added tests. Today, more than ever before, consumers consider safety to be an influential factor when making vehicle purchasing decisions, and are demanding ever-increasing levels of safety.

In December 2015, we announced plans to improve the 5-Star Safety Ratings program, known as NCAP. We held two public meetings in January 2016 on the proposal, known as NCAP Tomorrow, and we intend to analyze the comments received from those, as well as from the public docket, and issue a final decision notice on the planned changes. We will launch a consumer awareness effort to help vehicle shoppers understand the new ratings, as well as briefing industry and safety stakeholders.

Strategy: Enhance Public Understanding of NHTSA's Programs

NHTSA has a breadth of data, knowledge and expertise readily available to assist everyone from small children to public policy makers in making safe decisions about vehicles, occupant protection and traffic safety. Yet we need to improve the public's understanding of what we do, in order to share these resources. Through our website and other outreach tools, we are working to make sure consumers recognize us as

the trusted agency for all things related to vehicle and traffic safety. Our new logo and marketing materials aim to make the public more aware of the breadth of NHTSA's programs.

Strategy: Update NHTSA's Website

When consumers need information, the first place they typically turn is to the Internet. We are consolidating our consumer-facing websites (NHTSA.gov, Safercar.gov, and Distraction.gov) into a comprehensive, user-friendly platform that will serve as the premier source of traffic and vehicular safety information. It will incorporate mobile-friendly responsive design, optimize search capabilities, and integrate our social channels in order to spread important, timely safety messaging.

Objective 4: Coordinate Global Road Safety

According to the World Health Organization (WHO) estimates in its Global Status Report on Road Safety, more than 1.25 million people die and nearly 50 million are injured each year on the world's roads. We work with road and vehicle safety experts around the world to share our experience and countermeasures and programs we have developed and implemented to curb the road crash fatalities in the United States. We exchange information with other nations concerning emerging traffic problems, countermeasure strategies, and program evaluations, as well as provide critical technical assistance for developing and newly motorizing nations to prevent escalating vehicle related fatalities as a result of increasing mobility. Additionally, we work with international partners in an effort to evaluate advanced motor vehicle safety technologies and investigate alternative regulatory approaches to ensure safe deployment of these technologies and set the stage for harmonized standards and regulations for vehicle safety.

Strategy: Promote Best Traffic Safety Practices Globally

We work with domestic and foreign stakeholders to gather and exchange information on road crashes in order to consider appropriate strategies and develop effective countermeasures.

Strategy: Improve Motor Vehicle Safety Through Global Harmonization

We will work with foreign governments, non-governmental stakeholder groups, the motor vehicle industry and automotive safety consumer groups to cooperate on global harmonization of vehicle regulations as a means for improving motor vehicle safety.

Performance Goals and Indicators for Proactive Safety

Strategic Goal: Safety

Strategic Goal: Proactive Vehicle Safety	
Performance Goal	**Performance Indicators**
Improve EWR reporting and analysis fatalities.	Establish an Agency/industry EWR working group.
Improve cybersecurity threat information sharing across the automotive industry.	Support continuous updates, through the Auto-ISAC, of industry-wide cybersecurity best practices.
Strategic Objective: Retool Recalls	
Increase recall completion rates.	Identify industry-wide best practices and conduct nationwide campaigns.
ODI Enhancements.	Roll-out realignment.
Strategic Objective: Inform and Empower Consumers	
Improve NCAP.	Issue NCAP upgrade final rule. Conduct a consumer awareness campaign.
Increase public recognition of NHTSA's activities.	Increase the engagement of the public with our content through our social media channels.
Strategic Objective: Coordinate Global Road Safety	
Through global harmonization, improve safety of motor vehicles and promote the deployment of proven safety technologies.	Global NCAP to improve safety technologies on vehicles world-wide.

Table 2. Performance Goals and Indicators for Proactive Safety

Strategic Goal 3: Automated Vehicles

Advanced vehicle technologies promise to revolutionize roadway safety by preventing crashes from ever occurring. Automated driving systems, including fully self-driving vehicles, will pioneer a new world of vehicle operation and safety. As the Federal agency responsible for vehicle safety, and having been actively engaged in advanced safety technology research for decades, we are uniquely positioned to move beyond the traditional regulatory approaches to ensure the safety of new vehicle technologies through innovation, research, and partnerships.

In addition to the many policy issues surrounding automated vehicles (AV), we will continue research on safety performance measures and tests for these systems. We will also study the effects of automation on human capability, and conduct feasibility studies to address occupant design issues.

Objective 1: Provide National Leadership for the Safe Deployment of Automated Vehicles

On September 20, 2016, the Department released the Federal Automated Vehicles Policy, an unprecedented, proactive measure to safely test and deploy automated vehicles without stifling innovation. The four-part policy was thoughtfully developed with extensive public input, including two public meetings and an opened a public docket to engage as many stakeholders as possible as we build policies governing automation innovations. The components include:

- The Vehicle Performance Guidance for Automated Vehicles – This offers manufacturers, developers and other organizations guidance on the safe design, development, testing and deployment of automated vehicles. It includes a 15-point Safety Assessment that outlines objectives on how to achieve robust design while allowing for flexibility in how the objectives are met. The Guidance asks manufacturers to document how the objectives are met.
- Model State Policy – This section presents a clear distinction between Federal and State responsibilities for regulation of highly automated vehicles, and suggests recommended policy areas for states to consider with a goal of generating a consistent national framework for the testing and deployment of highly automated vehicles.
- NHTSA's Current Regulatory Tools – This discussion outlines NHTSA's current regulatory tools that can be used to ensure the safe development of new technologies, such as interpreting current rules to allow for greater flexibility in design and providing limited exemptions to allow for testing of nontraditional vehicle designs in a more timely fashion.
- Modern Regulatory Tools – This discussion identifies new regulatory tools and statutory authorities that policymakers may consider in the future to aid the safe and efficient deployment of new lifesaving technologies.

Our goal in all these efforts is a nimble, flexible framework that allows us to keep pace with the breathtaking speed of vehicle innovation, the most significant technology leap in more than a century of automotive history. We also recognize that we are in a time of rapid change. We will continue public outreach and we are committed to routine updates to each component of the Policy as we accelerate down the revolution in roadway safety.

Strategy: Improve, Expand and Oversee Vehicle Performance Guidance

While few regulatory burdens stand in the way of full vehicle automation in the United States, entities still bear the responsibility to prove their compliance with Federal Motor Vehicle Safety Standards (FMVSSs). In addition, though many automated vehicle functions may not be covered by specific regulations, entities designing new automated vehicle systems are still required by the Motor Vehicle Safety Act to ensure their systems are free of unreasonable risks to motor vehicle safety (typically known as defects). Thus, while we continue to execute our research program, we expect entities planning to test and deploy highly automated vehicles to use the

deployment guidance, industry best practices, and a number of their internal processes and strategies to ensure that their systems will be safe under real world conditions.

The Vehicle Performance Guidance offers best practices for entities designing, testing and planning to deploy highly automated vehicle systems. It includes a 15-point Safety Assessment, which outlines objectives of robust design, and asks manufacturers to proactively document how their design choices and risk methodologies have addressed potential safety risks.

As with all other sections of the Federal Automated Vehicles Policy, the Guidance is a living document, with many next steps. We intend to pursue public input, including a public workshop and an expert review. We will formally request actions from specific industry to further enhance the guidance in areas such as data collection and test procedures. We will also pursue anonymous data sharing mechanisms. Longer term, we will consider updates to FMVSS, and consider rulemakings to require the safety assessment and to require entities planning to test or operate AVs on public roadways to register with the agency.

Strategy: Facilitate a National Framework of Laws and Policies To Govern Automated Vehicles

Automation promises not only to revolutionize how we drive, but also how we license, register, inspect, and train people to use such vehicles. To avoid a patchwork system of State policies that might impede interstate travel, we issued the Model State Policy.

State governments play an important role in facilitating AVs, ensuring they are safely deployed and promoting their lifesaving benefits. The Model State Policy confirms that States retain their traditional responsibilities for vehicle licensing and registration, traffic laws and enforcement, and motor vehicle insurance and liability regimes while outlining the Federal role for HAVs. We will continue to work with stakeholders to develop nimble model State policies to assist States with their role in governing automated vehicles. We will explore mechanisms to educate State officials on available technologies, as well as NHTSA's roles and activities. We will also develop a work plan to engage specific stakeholders' help to continually enhance the Model State Policy.

Strategy: Explore NHTSA's Current Authorities Pertaining to Oversight Of Automated Vehicles

We have, and will continue to explore ways to use our current authorities – rulemaking, exemptions, and interpretations – to develop a nimble, orderly process for deployment, in addition to our defects and enforcement authorities.

In order to help manufacturers of AV understand the use of these tools, we prepared new information and guidance documents for those seeking to request exemptions and letters of interpretation. We've also streamlined our review process, and we've committed to issuing simple AV-related interpretations in 60 days and exemptions in six months – processes that typically take much longer. As with other elements of the policy, we will seek public comment and provide routine updates to guidance on our current authorities.

Strategy: Explore Modern Regulatory Tools for Federal Leadership and Oversight of Automated Vehicles

While we are committed to the innovative use of the many tools and authorities at our disposal, we anticipate new ones will be needed. We will explore new authorities, such as safety assurance, pre-market approval, cease-and-desist authority, and post-sale regulation of software changes. In order to test and monitor the safety of AVs, we will explore new tools, such as variable test procedures, functional and system safety, enhanced data collection, recordkeeping, and reporting. Lastly, we will look at ways to broaden existing agency expertise and knowledge through a network of experts, as well as exploring special hiring tools.

Objective 2: Provide Federal Leadership for the Deployment of Vehicle-to-Vehicle Communications

NHTSA has been researching Vehicle-to-Vehicle (V2V) communication technology for more than a decade, in partnership with others in the U.S. DOT, the automotive industry, and academic institutions. V2V is a crash avoidance technology, which relies on the communication of information between nearby vehicles to potentially warn drivers about dangerous situations that could lead to a crash. V2V can enable warnings that are not currently available to drivers. Two potential applications of V2V technology include:

- Intersection Movement Assist (IMA): IMA warns the driver when it's not safe to enter an intersection because of an increased potential for collision with another vehicle.
- Left Turn Assist (LTA): LTA warns the driver when there is strong probability of collision with an oncoming vehicle when making a left turn, even when the driver's line-of-sight is blocked by a vehicle also making a left turn from the opposite direction.

Many more potential applications exist, but NHTSA estimates that these two alone will prevent up to 600,000 crashes, up to 270,000 injuries and save over 1,000 lives each year when implemented across the entire fleet.

Objective 3: Enable a Robust, Layered Framework for Vehicle Cybersecurity

Over the last few decades, our lives have been revolutionized by the rapid connectivity made possible by computers, the Internet, satellites and other technologies. As these systems became integral to our daily lives, so too did the potential for attacks to those same systems. Cybersecurity rose out of necessity to protect these vital systems and the information contained within

them. Applied to vehicles, cybersecurity takes on an even more important role: systems and components that govern safety must be protected from malicious attacks, unauthorized access, damage, or anything else that might interfere with safety functions.

For these reasons, vehicle cybersecurity was never an afterthought for us. In exploring the potential of connected vehicles and other advanced technologies, we remained aware that cybersecurity would be essential to the public acceptance of vehicle systems and to the safety technology they govern.

To ensure a robust cybersecurity environment for these dynamic new technologies, we modified our organizational structure in 2012 to focus on vehicle electronics and cybersecurity. Since then, we've developed vital partnerships, adopted a layered research approach, considered legislative additions, and encouraged members of the industry to take independent steps to help improve the cybersecurity posture of vehicles in the United States. Our goal is be ahead of potential vehicle cybersecurity challenges, and seek ways to address or avoid them altogether.

Strategy: Provide Leadership in Automotive Cybersecurity

In January 2016, we held two cybersecurity roundtables with industry and cybersecurity experts to facilitate the development and adoption of vehicle cybersecurity standards and best practices. By proactively bringing manufacturers, suppliers, technology companies, researchers, and government agencies together, we identified actionable steps for stakeholder groups to take to continuously improve vehicle cybersecurity.

We support industry's efforts to continuously update best practices on handling cyber incidents, and will continue to develop our own. We will also seek ways to formalize lessons learned in order to facilitate knowledge sharing between industry, suppliers and the agency.

While we work to implement the research program that supports our current cyber security posture and policies, we will continue to expand our in-house capabilities to do so. This will allow us to continue to provide leadership and partner with our stakeholder groups, including suppliers and heavy vehicle manufacturers, to improve the industry's ability to deftly respond to and remedy cyber incidents.

Objective 4: Democratize Safety Technologies

The full potential of advanced safety technologies won't be realized until all vehicles on the road are similarly equipped. Historically, safety features have initially only been available in high-end vehicles, or as expensive add-on packages. Over time, as these technologies become cheaper to produce, they make their way into more affordable vehicles. It is estimated that penetration of safety technologies can take twenty years or more with this approach.

Yet, we know that people are keeping their vehicle longer than ever before. While some of this is due to improvements in engineering and materials, much of this is due to economic

disparity and the inability to purchase new vehicles with new safety features. We want to make sure that lifesaving vehicle technologies are as widely available to everyone as possible, and not just to the wealthiest among us.

Strategy: Promote the Deployment of Automatic Emergency Braking in All Vehicles

On March 17, 2016, NHTSA and the Insurance Institute of Highway Safety (IIHS) announced a groundbreaking commitment on the part of 20 automobile manufacturers to provide Automatic Emergency Breaking (AEB) in virtually all passenger vehicles by 2022. AEB systems have enormous lifesaving potential, by detecting imminent crashes and applying the brakes if the driver doesn't take action quickly enough. Knowing how long a traditional rulemaking to require AEB in vehicles would take, NHTSA and IIHS charged the auto industry to find a way to do it faster. This historic commitment means that a feature now only available on high-end models will be a standard safety feature on virtually all new cars by 2022, and on heavier trucks and SUVs by 2025.

We will also develop more advanced test procedures for AEB to assist in preventing crashes with other road users, such as pedestrians and bicycles. Expanding AEB to other vehicle types, such as heavy vehicles and motorcoaches, is another strategy we will explore.

Strategy: Develop Driver Alcohol Detection System for Safety

The Driver Alcohol Detection System for Safety (DADSS) program began in 2008 as a collaborative research partnership between NHTSA and the Automotive Coalition for Traffic Safety (ACTS), representing 17 automobile manufacturers to assess and develop alcohol-detection technologies to prevent vehicles from being driven when a driver's BAC exceeds the legal limit. The program focuses on developing non-invasive, seamless technologies to measure driver BAC and reduce the incidence of drunk driving. The devices must be able to measure alcohol accurately, precisely, and reliably in a very short time (325ms) so the sober driver is not inconvenienced. The devices are intended to prevent alcohol-impaired drivers (BAC $\geq$ .08) from driving their vehicles.

In 2013, we extended our agreement with ACTS, and the project entered Phase 2, which includes additional research and testing of the two technology prototypes to reduce the size and close gaps in performance relating to speed, accuracy and precision.

The DADSS team has made great progress, reducing the size of the breath-based unit by 85 percent and the touch-based unit by 93 percent from the original prototype sizes. The team must and is continuing to further reduce the size and cost of the units; improve their speed, accuracy and precision; and conduct real world tests for reliability and durability. As the research continues, the team is focused on making sure the technology meets the strict Performance Specifications set related to precision, accuracy and reliability.

As part of the ongoing research, the breath-based and touch-based prototypes will be integrated into vehicles for a series of field tests, to thoroughly test the systems in real-world scenarios. The first of these multi-vehicle field operational trials is targeted to begin early 2017.

Performance Goals and Indicators for Automated Vehicles

Strategic Goal: Automated Vehicles

Performance Goal	Performance Indicators
Strategic Objective: Safely Deploy Highly Automated Vehicles	
Provide Federal leadership for the safe deployment of automated vehicle for any entity testing, operating, and deploying highly automated vehicles.	Establish work plan to enhance specific safety areas of the Vehicle Performance Guidance.
Provide Federal leadership to States to ensure consistent oversight of licensing, registrations, inspection, and training for automated vehicles.	Establish work plan for the Model State Policy.
Expedite use of simple letters of interpretations and limited exemptions.	Respond to simple AV-related letters of interpretation in 60 days. Respond to simple AV-related exemptions in six months
Identify new tools and authorities to enable the safe deployment of automated vehicles.	Explore new tools and authorities.
Strategic Objective: Enable a Robust, Layered Framework for Vehicle Cybersecurity	
Improve threat and incident intelligence sharing in order to handle cyber incidents effectively.	Develop internal reference processes for handling future vehicle cyber incidents, develop and promote best practices.
Strategic Objective: Democratize Safety Technologies	
Make AEB standard in all vehicles by 2022.	Percentage of the fleet with AEB.
Develop DADSS.	Conduct multi-vehicle field operational trial beginning in FY 2017.

Table 3. Performance Goals and Indicators for Automated Vehicles

Strategic Goal 4: Human Choices

Over the past 50 years, we developed a wide range of evidence-based strategies and programs on traffic-safety-related behavioral change methods. These strategies, summarized in *Countermeasures that Work, 8th Edition*, have contributed to the record low fatality rate seen in 2014. But to strive toward zero fatalities, it's necessary to develop innovative new approaches to complement those proven to work. First and foremost is to develop a social norm in the United States that refuses to accept 35,092 fatalities every year as unavoidable and simply an act of fate. If a 747 airline jet crashed every week, the public would demand an immediate call for change. Yet that is the equivalent of what happens every week on American roadways. Building a more proactive safety culture in the United States would create the conditions to support and sustain new strategies and programs to reach the ambitious goal of zero fatalities.

Objective 1: Promote Innovative Solutions for Behavioral Safety

While advanced safety technologies will play an important role in reducing the impact of poor human choices, we can't wait until that technology is available. We must seek new strategies to encourage people to make the right choices when getting behind the wheel, in the car, or on the road.

Strategy: Facilitate a Coalition For Behavioral Safety

With hundreds of millions of us using the roads every day, no one is in road safety alone. In early 2016, we held 6 regional summits across the country to cast a wide net for new solutions to pervasive problems like drunk, drugged, distracted and drowsy driving. In August, we held a technical workshop where we envision an innovative approach to address distraction by focusing on its inverse – situational awareness – to overcome the barriers that often impede innovation and progress. Then on October 5, 2016, we convened the Road to Zero Conference to address behavioral safety challenges in a new, comprehensive way, starting with the goal of attaining zero road traffic deaths and building our strategy from the ground up. We were joined by the Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), and the National Safety Council (NSC), in addition to safety advocates, the automobile industry, State and local partners, public health officials, transportation partners, and others to look at innovations in education, State laws, and enforcement. We challenged them to establish a near-term action plan to reduce traffic deaths, and collaborate with us over the next year to develop a long-term, scenario-based plan to eliminate road traffic deaths.

Strategy: Drowsy Driving Initiative

Drowsy driving is a dangerous behavior that leads to thousands of deaths and injuries each year. It is also a controllable behavior that drivers will modify if given sufficient information and motivation. We developed the March 2016

Drowsy Driving Research and Program Plan to guide our efforts to end drowsy driving crashes over the next several years.

The plan is our initial effort to enhance the science and program initiatives around drowsy driving and addresses six broad focus areas. We will focus on improving measurement and problem identification by working with law enforcement to better identify drowsy drivers, through the analysis of new data sources and the use of new methodological approaches. However, since drowsiness is inherently more challenging to observe and enforce than other risky behaviors, more emphasis will be placed on education strategies and policy development, along with in-vehicle warning systems, and environmental countermeasures like rumble strips. The proposed program is also intended to establish a strong evidence-based foundation on which an ongoing, comprehensive drowsy driving program can be built.

Strategy: Reduce Distracted Driving

Like drowsy driving, distracted driving is a pervasive public health issue that must be approached in a multi-disciplinary fashion. We continue to conduct research on the causes and scope of distraction in order to develop effective countermeasures, and we are committed to working with States as they implement comprehensive programs based on their specific demographic data.

Additionally, we are enacting the distracted driving grant program as modified by the FAST Act, which allows more dedicated funding for distracted driving programs to qualifying States.

Strategy: Address Diverse and Vulnerable Populations

NHTSA is a data-driven agency, and our data is recognized globally as the preeminent source of U.S. road safety statistics. We use this data to inform our programs and regulations, so that we know we are addressing the issues with the most potential to save lives. Our data often points us to vulnerable road users, such as youth, pedestrians, motorcyclists, bicyclists, and older road users, who are disproportionately involved in certain types of crashes.

When we identify these issues, we explore countermeasures and vehicle standards to provide added safety benefits for these populations. As we continue to develop programs that protect such groups, we also have to address the nation's growing diversity. The effectiveness of our programs relies on their acceptance by a variety of different audiences, based on age, gender, and language. We must strive to reach these diverse groups with our programs and regulations.

Strategy: Reduce Pedestrian and Bicyclist Fatalities

Unlike the steady decline in overall fatalities, pedestrian and bicyclists have proven to be vulnerable road users for several years. In 2015, the fatality rates for pedestrians and bicyclist rose 9.5 and 12.2 percent over 2014, respectively. With an increase in demand for more livable communities with diverse transportation options, we are working with internal U.S. DOT partners as well as external stakeholders to explore and recommend strategies that expand these environmentally friendly transportation options while making them safer.

We will continue to provide technical assistance to State and local partners to adopt policies and programs needed to protect pedestrians and bicyclists. We support FHWA's strategic agenda on pedestrians and bicyclists by providing expertise on behavioral, educational and enforcement elements for comprehensive State and local programs.

In the Fixing America's Surface Transportation Act (FAST Act) of 2015, Congress identified pedestrian and bicyclist safety as a National Priority Safety Program, by establishing a new Non-Motorized Safety Grant program. The grant program provides funding for States in which non-motorized (primarily pedestrian and bicyclist) fatalities are more than 15 percent of their overall highway fatalities.

Strategy: Enhance Older Road-User Safety

Older road users are overrepresented in vehicle crashes. In 2015, 15 percent of the total U.S. resident population, or 47.8 million people, were age 65 or older. They also made up 18 percent of all traffic fatalities. They tend to be more vulnerable, and less able to withstand even minor crashes compared to younger counterparts. Strategies to protect older road users and help them maintain their mobility are essential, as the number of people reaching 65 in the next decade will reach record numbers. In November 2016, we will hold a summit on older drivers that will help us to establish our next five year plan to keep older road users mobile and safe.

Strategy: Enhance Youth Traffic Safety Efforts

Recognizing that motor vehicle crashes are the leading cause of death for people ages of 11 and 16 -24 (2014), we employ youth engagement strategies to keep young road users meaningfully involved in highway traffic safety efforts and actively engaged in their own health and safety. Tasked with reducing deaths, injuries and economic losses resulting from motor vehicle crashes, we strive to improve youth traffic safety across the areas of impairment, occupant protection, speed, distraction, graduated driver licensing, driver education, and pedestrian, bicycle, motorcycle, and school bus safety. While our current efforts include research, education, outreach, enforcement, adjudication, and systemic improvements to promote and increase responsible behaviors, we will work with youth to improve our Nation's traffic safety culture.

Strategy: Enhance Motorcycle Safety

In 2015, 4,976 motorcyclists died on American roads, an 8.3-percent increase from 2014. We are currently updating our motorcycle safety plan to address these increases. As with many of our programs, we rely on the principles of education, engineering and enforcement to form effective motorcycle safety countermeasures. We will continue to develop and deliver comprehensive training courses to motorcycle safety stakeholders in the States, as well as educational materials for motorists on sharing the road with motorcyclists. We will continue to maximize motorcycle safety by promoting helmet use and rider acceptance.

We also develop responsive and timely regulations of motorcycle equipment, promoting new technologies to enhance motorcyclist safety. Finally, we will work with law enforcement to improve their ability to enforce motorcycle laws, particularly in area of impaired driving, where motorcyclists are overrepresented in fatalities.

Strategy: Improve Pupil Transportation Safety

On July 23, 2015, we held a meeting, School Bus Occupant Protection: Taking Safety to a New Level. We held the meeting to update the current state of knowledge in the technology of three-point belt systems, identify operational and policy challenges and solutions, and explore other mechanisms to improve pupil transportation safety. Building on the discussion from the meeting, we are taking meaningful steps to address the challenges identified by the experts in the years ahead, and will hold another meeting in December 2016 to identify additional areas of research, education, and collaboration.

In the next several years, we seek to work with school systems that already use seat belts, particularly three-point seat belts systems, to develop a best practices guide and seat belt use policy. We will also look at the use of seat belts on school buses to determine if they reduce disruptive student behavior and therefore decrease driver distraction. Finally, we will facilitate the update of the school bus operator training to include the newest Child Passenger Seat training, and include seat belt policy and use guidance.

Strategy: Establish a National Heatstroke Prevention Plan

From 1998-2015, 661 children across the Nation died due to heatstroke in hot vehicles. Such deaths are a leading cause of non-crash-related fatalities for children 14 and younger.

- Fifty-four percent were "forgotten" by a caregiver.
- Twenty-nine percent were playing in an unattended vehicle.
- Seventeen percent were intentionally left in the vehicle.

In 2012, we began our Where's Baby? Look Before You Lock campaign after a first-of-its-kind roundtable and series of town hall discussions around the country that helped identify ways to mitigate these tragedies. Building on this campaign, we are developing a vehicular heatstroke prevention plan. The plan will leverage the network of more than 400 safety coalitions that have worked with us to spread awareness of the issue, outline targeted social media engagements, and provide updated resources via our Parents Central website.

The plan will also explore technological detection and reminder solutions. We have tested products, met with inventors, and have learned about numerous efforts to develop add-on or child seat devices. This is a promising development and we plans to evaluate this and other types of vehicle-based systems once they are available.

Objective 2: Leverage Law Enforcement Partnerships

Research has consistently demonstrated that high visibility enforcement, and integration of traffic enforcement into routine operations, results in reductions of crashes, fatalities and serious injuries. A high-visibility enforcement effort, coordinated through the Law Enforcement Liaison (LEL) network, provides effective and efficient delivery of traffic safety countermeasures. Place-based and data-driven enforcement operations further enhances law enforcement's ability to focus limited resources where they can have the greatest impact for improving safety outcomes. These enforcement strategies combined with prosecutorial and judicial training, and Driving While under the Influence (DWI) courts result in improved safety and a reduction in social harm for the community.

Strategy: Seek Active Nationwide Participation in High-Visibility Enforcement (HVE) Activities

One of the most effective countermeasures in reducing highway traffic fatalities is creating general deterrence through HVE. When the perceived risk of getting caught by law enforcement goes up, the likelihood that people will engage in unsafe driving behaviors goes down.

Strategy: Expand Use of DWI Courts

DWI Courts are an effective approach to combatting alcohol-impaired driving among repeat DWI offenders and offenders having high blood alcohol concentrations at time of arrest. These problem solving courts attack the source of the problem by taking a comprehensive approach to changing behavior that includes accountability and long-term treatment. In June 2016, NHTSA issued a report entitled, Survey of DWI Courts, which examines characteristics of current DWI courts. We plans to develop an evaluation program in order to address a number of the key questions about the operation of DWI Courts, and to obtain information that DWI Courts will be able to use in determining how they can best apply their resources and maximize their efforts.

Objective 3: Provide Oversight and Guidance to State Highway Safety Offices

States are valuable partners in achieving our safety mission. We administer the Highway Traffic Safety Grants program, designed to help States use evidence-based countermeasures to mitigate priority traffic safety issues in their jurisdictions by employing proven countermeasures with Federal funding. We remain committed to being a good steward of these Federal dollars by providing program technical assistance, as well as oversight and guidance to States on establishing metrics that demonstrate progress in the implementation of our behavioral safety programs.

We are implementing changes to the safety grant programs enacted in the Fixing America's Surface Transportation (FAST) Act.

Strategy: Improve Transparency During The Grant Management Process

NHTSA works closely with States, both at the Federal and Regional levels, to provide expert assistance to States to identify and address traffic safety issues unique to their jurisdictions. This helps States to decide which grant programs to apply for, and how to use those funds, if awarded. Additionally, we work with them to establish performance goal and metrics to illustrate the success of the countermeasures they have put in place.

We are developing a State portal for grants management that will provide ease of use for States, as well as greater transparency during the grant management process. The portal will allow States to provide the information that they are accountable to NHTSA for electronically, such as the State Highway Safety Plans.

Objective 4: Provide Assistance and Oversight to State Departments of Motor Vehicles

We are committed to assisting State DMVs and other recipients of NHTSA funds with identifying and removing unlawful barriers that discourage individuals from accessing State drivers licensing services. By providing comprehensive non-discrimination guidance, training, and technical assistance to State DMVS, and conducting compliance activities when necessary, we help ensure that State driver licensing programs remain accessible to all drivers, regardless of their disability, race, color, national origin, gender or membership in another class protected under Federal civil rights laws.

Strategy: Work Closely with Stakeholders To Develop Technical Guidance

We partner with the AAMVA and other stakeholder groups to develop technical guidance to assist State DMVs in making their licensing programs more accessible to the disabled and those with limited English proficiency (LEP), among others. We will provide ADA and Title VI/LEP assistance by providing targeted training and speaking at upcoming stakeholder conferences and meetings.

Performance Goals and Indicators for Human Choices

Strategic Goal: Human Choices

Strategic Objective: Promote Innovative Solutions for Behavioral Safety

Performance Goal	Performance Indicators
Identify new and innovative behavioral safety approaches to traffic safety.	Establish a behavioral safety coalition. Develop a scenario-based plan to reach zero traffic fatalities with coalition.
Increase awareness of the dangers of drowsy driving.	Establish a national survey on drowsy driving.
Reduce distracted driving	Finalize the Phase II Guidelines; Update Phase I Guidelines
Ensure that messages and materials are tailored for specific audiences, using the most effective communications vehicles.	Develop 100 percent of major campaigns in Spanish.
Reduce Pedestrian and Bicyclist Fatalities	Reduced rate of fatalities (GPRA)
Identify strategies to enhance older road users' safety and mobility.	Issue a five year plan for older road user actions.
Create youth engagement opportunities designed to mentor and cultivate young leaders, strengthen their understanding of highway safety, and prepare them for future public service opportunities.	Increase investment in organizations and coalitions that engage young leaders who are interested in promoting traffic safety among their peers and in their schools and communities. Increase support for annual initiatives including Global Youth Traffic Safety Month and National Teen Driver Safety Week. Create ladders of opportunity, providing students with an introduction to transportation careers through jobs, internships, mentoring and/or career exploration activities.
Anticipating that the U.S. will become a majority-minority population by 2044, reduce racial/ethnic disparities in traffic crashes by working with minority youth to develop educational materials for their peers.	Support the driver education community's maintenance and promotion of National Driver Education Standards. By 2021, provide to five States technical assistance regarding the adoption and implementation of the National Driver Education Standards.
Reduce motorcyclist fatalities	Decreased rate per 100,000 motorcycles registered (GPRA goal)
Improve safety in and around school buses	Coordinate a best practices guide for three-point belt use on school buses.

Strategic Objective: Leverage Law Enforcement Partnerships

Increase the number of jurisdictions that participate in the National HVE activities.	Number of jurisdictions participating in annual HVE activities.
Enhance DWI court effectiveness.	Evaluate components of DWI courts.

Strategic Objective: Provide Oversight and Guidance to State Highway Safety Offices

Increase transparency during the grant management process.	Deploy the State Highway Grant Portal by FY 2016.
Increase traffic to NHTSA's Web site in greater numbers and improve the amount of time they spend on our pages.	Increased number of complete safety complaints from vehicle owners. Increase the engagement of the public with our content through our social media channels.

Table 4. Performance Goals and Indicators for Human Choices

Strategic Goal 5: Organizational Excellence

We are dedicated to being an innovative leader in roadway safety. We know that achieving our mission relies on strong management of our organization and resources. While not traditionally identified as a resource, quality data is essential to everything we do to reduce fatalities. Like data, robust information technology (IT) systems allow us to leverage our resources to work smarter and more strategically.

Without our cadre of dedicated employees, it would be impossible to achieve our mission. NHTSA is dedicated to hiring and retaining the best and brightest employees to augment our diverse workforce with the competencies and skills needed to face the ever-changing road ahead.

Finally, we take stewardship of our financial resources and assets seriously. Continued commitment to mission-driven budgets, strong financial oversight and performance management ensure we efficiently and effectively deliver programs that serve the American people, while being respectful of their taxpayer dollars.

Objective 1: Properly Identify Human Capital Needs

The success of our programs is heavily reliant upon an engaged and productive workforce. From recruiting and retaining employees with the highly specialized skills and relevant background experiences to ensuring accessibility to information and resources, we are committed to maintain a culture in which the human resource is considered our greatest resource. In a time of increasing uncertainty regarding future funding, we are continually trying to do more with less.

Strategy: Develop and Implement Human Resources Policies That Enable The Agency To Recruit and Retain Appropriate Personnel

In identifying personnel needs, we will consider current knowledge gaps, as well as future needs. As the Nation's demographics change and emerging technologies enter the marketplace and private vehicles, we will need to assure that expertise in these areas is on staff, both through recruiting appropriate candidates and by offering specialized training to existing staff. During the recruitment process it is imperative that the announcements are targeted appropriately and that we make employment offers that are competitive enough to attract talent.

Objective 2: Improve NHTSA's Ability To Deliver Quality Data and Analysis

NHTSA is a data driven organization and the collection and analysis of crash data to identify trends is vital to developing effective countermeasures to improve highway safety. We continuously work to modernize the methods it uses to collect, analyze and disseminate data, including the underlying information technology.

Strategy: Improve the Quality, Timeliness and Relevance Of Safety Data Collected

As part of our Data Modernization Project, the agency created two new data collection systems, the Crash Reporting Sampling System (CRSS) and Crash Investigation Sampling System (CISS) including incorporating the latest technology for data collection and revamping the underlying information technology.

CRSS is used to estimate the overall crash picture, identify highway safety problem areas, measure trends, drive consumer information initiatives, and form the basis for cost and benefit analyses of highway safety initiatives and regulations. CISS collects detailed crash data to help scientists and engineers analyze motor vehicle crashes and injuries in crashes involving at least one passenger vehicle towed from a crash scene. Both systems are nationally representative and require an adequate number of collection sites to provide quality data to inform decision-makers. These systems, and other data collection enhancements, such as enabling states to transfer crash data electronically, will be refined and improved over the next five years.

In addition, we will engage our State safety partners in improving the quality of data in the Fatality Analysis Reporting System and all other crash data collection activities through the release of data standardization tools, such as the Model Minimum Uniform Crash Criteria (MMUCC).

Strategy: Increase the Power of Data Analysis and Improve Data Sharing

NHTSA's data is used by decision-makers around the world to develop programs, policies, and regulations that save lives on roadways. Being able to easily access and analyze our data helps our many partners and stakeholders. Data Modernization includes adding tools to improve data analysis and visualization, as well as to increase the availability of our data.

Objective 3: Ensure NHTSA Has State-of-the-Art Information Systems

Information technologies allow us to manage complex programs efficiently. We use many mission-critical IT systems that need continuous updating and improvement. Some of the areas include: 1) more timely data collection and analysis; 2) additional databases that support NHTSA's mission; 3) IT systems that help facilitate internal processes; 4) data modernization;

Information technologies allow us to manage complex programs efficiently. We use many mission-critical IT systems that need continuous updating and improvement. Some of the areas include: 1) more timely data collection and analysis; 2) additional databases that support NHTSA's mission; 3) IT systems that help facilitate internal processes; 4) data modernization; and 5) improve the recall list database. We're currently modernizing our IT systems, including significantly updating and strengthening the IT infrastructure necessary to support the agency's mission. Continuously strengthening and modernizing these programs will increase our ability to capture and provide timely and accurate traffic safety information.

Strategy: Modernize IT Systems

We are committed to providing stable, scalable, and flexible data systems to support changing business needs. IT modernization enables the agility to meet our growing demands for big data analytics and mobile efforts. By eliminating legacy data systems, we will increase productivity through system integration and compatibility, ultimately reducing maintenance costs. Our current IT modernization initiatives encompass our key data collection systems, the Motor Vehicle Importation Information System, and the agency's website redesign.

Strategy: Develop and Modernize Existing and New Systems to Improve Execution of NHTSA's Mission in the Collection and Analysis of Data

We will provide robust analytic tools, such as the CIF, to maximize the use of human resources towards analyzing potential trends. The CIF toolset expands our analytical capabilities to include: predictive analytics, seamless analysis of data across stove-piped systems: and the capture, automation and centralization of key queries and analysis for re-use.

We will also focus on streamlining manual processes through workflow automation tools, such as the CIF's Case Manager, and Microsoft's Dynamic. Building on the successful transition of several legacy systems, we will continue to identify opportunities to utilize cloud services to increase scalability and capacity capabilities, and decrease cost. Other ongoing modernization efforts include: State Metrics- a public site that will merge data from FARS, STISTI, and CDC through dynamically refreshed dashboards and other data visualization tools Artemis- IVOQ reformatting of consumer complaint data collection forms; SharePoint upgrade; NHSTA Enterprise Portal (NCAP, E-Confidentiality) – manual process automation; and Corporate Average Fuel Economy (CAFE) Management Suite System – a data integration exchange with Environmental Protection Agency to support CAFE credit account establishment, trading, transfer, and tracking for light-duty vehicles.

Objective 4: Improve Financial Performance

Effectively managing our financial resources in a dynamic operating environment requires strong oversight, yet in doing so, we more readily achieve our mission, and protect valuable taxpayer dollars. We are committed to serving the American people through the delivery of fiscally responsible, mission-driven programs.

We will do this by developing budgets designed to advance our mission-related strategic goals and objectives, and by providing accurate,timely financial information to leadership and programs to inform decisions, policies, and program development.

Performance Goals and Indicators for Organizational Excellence

Strategic Goal: Automated Vehicles

Performance Goal	Performance Indicators
Strategic Objective: Safely Deploy Highly Automated Vehicles	
Replace legacy data collection system with CRSS.	Launch new CRSS and start data collection in 60 sites by 2016.
Increase the number of data collection sites in the new CISS	Launch new CISS by 2016; start collecting data in 36 sites by 2018
Enable Electronic Data Transfer of crash data by States.	Increase the number of States using the new electronic data transfer to 12 by 2018.
Improve data quality.	Release 5th edition of MMUCC by 2017.
Increase the power of data analysis.	Expand use within NHTSA of the vehicle identification number decoding tool by 2017
Improve data sharing	Release a user-friendly query tool by 2017.
Strategic Objective: Ensure NHTSA Has State-of-the-Art Information Systems	
Significantly update and strengthen the IT infrastructure necessary to support the agency's mission	Decrease in percentage of system downtime and required patches Increase in volume of system utilization; number of queries Reduced operational expenses(touch labor) due to cloud migration
Strategic Objective: Human Capital	
Streamline hiring processes.	Number of days to on-board new employees

Table 5. Performance Goals and Indicators for Organizational Excellence

Conclusion

NHTSA's breadth of roadway safety activities is vast, addressing vehicles, drivers, occupants, non-motorized road users, and even the emergency personnel that respond when a crash occurs. This is in keeping with the monumental importance of our safety mission. We will continue to leverage the expertise the Agency has honed through our many successful data-driven, science-based programs, policies and regulations to improve roadway safety, using our enforcement and regulatory authorities where they best serve public safety.

Yet, we will also use new tools to combat our most pervasive problems in order to make real progress toward eliminating roadway fatalities. We have made internal cultural shifts to approach roadway safety in new ways. Fostering proactive safety and improving communication with manufacturers and suppliers promises early identification and remedy of vehicle defects before tragedy occurs. Positioning the agency so that is able to nimbly provide oversight of advanced technologies allows us to ensure that promising safety features are safely and expeditiously introduced to the vehicle to save as many lives as possible.

We can't rely on the promise of technology alone to save lives, however. While we remain committed to the safe deployment of advanced safety technologies, we must address the behavioral causes of crashes. This will require a cultural shift, away from acceptance that 35,092 fatalities on our roadway each year is inevitable and not a reason to make meaningful societal changes. At the end of the day, we are all in roadway safety together. We have mothers and fathers, sisters and brothers, husbands and wives and children who use the roads daily. What wouldn't we do to keep them from being part of that statistic, a statistic that is indicated to rise?

This plan is one step in NHTSA's call to action to not just reduce fatalities and injuries, but move down the road to zero fatalities. We share this call to action with all road users: roadway safety is a shared responsibility. We call on our many safety partners, vehicle and equipment manufacturers, state and local elected officials, emergency responders, technologists, data scientists and policy experts to join us in searching for more definitive answers and developing creative, open data-driven solutions to improve safety, and some day eliminate deaths caused by motor vehicles on our Nation's roadways.

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