Do you know what your car can 6do?
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Advanced technologies that contribute to safer driving -- safety belts, air bags, anti-lock brake systems, adaptive cruise control, etc. --- have become an expected standard in today's cars. And tremendous progress has been made in vehicle crashworthiness in the past decade. Yet in 2015 highway fatalities increased by 8%, resulting in the most on-road deaths since 2008. Why the discrepancy?

Research Reveals Knowledge Gap
Despite our vision of a future powered by autonomous vehicles, the reality of today is that we are still very dependent upon human drivers with very human behaviors…compounded by a lack of knowledge regarding their vehicle capabilities. Recent research conducted by The University of Iowa shows that most consumers are unsure about how today's advanced technologies and potentially life-saving vehicle safety features work. Least understood by consumers was adaptive cruise control (65%) and lane departure warning systems (36%). They were even uncertain about features that have been standard in American cars for years – such as anti-lock braking systems and tire pressure-monitoring systems, according to the survey.

There is an old saying, "It's easy when you know how." So, the National Safety Council and the University created the *MyCarDoesWhat* campaign to help educate drivers how to best interact with vehicle safety features and promote safer driving experiences. And to further this education a new partnership was recently announced with the American Association of Motor Vehicle Administrators. The departments of motor vehicles will share the resources developed by the *MyCarDoesWhat* program to expand its educational reach, helping to prevent crashes and reduce deaths and injuries.

Technology, a Double-Edged Sword
This program is focused specifically on providing education on the safety technology features within a vehicle. Unfortunately, the intent of these technologies can be offset by the also-increasing entertainment and connectivity technologies. "It's a double-edged sword," said Deborah A.P. Hersman, president and CEO of the National Safety Council at a Detroit Automotive Press Association meeting. "Yes, we have an increase in preventive crash technology, but also a proliferation of infotainment systems that distract the driver. Regardless of handheld or hands-free, cell phone use remains the major cause of car crashes."

Ms. Hersman believes it should be easy to reduce the number of deaths due to human error (94%), but that automakers need to focus on technologies with the most potential to increase road safety. The *J.D. Power 2015 Driver Interactive Vehicle Experience (DrIVE) Report*^{SM} found at least 20% of new-vehicle owners indicate they don't want 14 of 33 technology features in their next vehicle. Features that are "not wanted" include: Apple CarPlay and Google Android Auto, in-vehicle concierge services, and in-vehicle voice texting. The report also found that among Gen Y buyers and lessees, the number of unwanted features increased to 23—specifically technologies related to entertainment and connectivity systems.

Wake Up People. You Are the Pilot!
According to the National Safety Council, the likelihood of dying from a vehicle crash is 1:112 as compared to 1:8015 in an airplane crash. Yet, if you queried drivers, I bet that few assign to themselves

the same level of safety responsibility when driving as they expect from an airline pilot. I'm quite sure any of us would be intensely upset if we saw our jet pilot distracted by a cell phone call.

But, as human behavior is…well, "human"… this means we will continue to make decisions that are mostly good, but sometimes bad. In addition to distracted driving, even attentive drivers often choose to speed, run stop signs and lights, neglect using turn signals, etc. If the question is how do we engineer out bad decisions by humans and create an environment where this doesn't happen, the argument for autonomous driving becomes indisputable.

But, as the vehicle becomes smarter and more responsible for interactions and the driver less so, this means that safe decision-making must be designed in, putting even more responsibility on the automakers. Look for another blog soon on that topic.

In the meantime, learn how Dassault Systemes can help automakers better manage complexity, optimize performance, and ensure vehicle safety to improve the driving experience.