US to examine technology for automated cars

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(AP)—Cars that drive themselves may hold the potential to save thousands of lives, an Obama administration safety official said Tuesday, as the U.S. government prepares to launch a research initiative to determine the safety and reliability of automated driving technologies.

Automated vehicles are the next "evolutionary step" in car technology, David Strickland, head of the National Highway Traffic Safety Administration, told an industry gathering sponsored by Swedish automaker Volvo and the Swedish Embassy in Washington. He said his agency has held extensive discussions with automakers and Google about what needs to happen before automated cars can be safely introduced to consumers.

"Automated vehicles offer an important and challenging method for reducing crash risk that we believes holds great promise," Strickland said. He noted that human error was a factor in about 90 percent of the over 33,000 traffic deaths recorded in 2010. "We have the chance of ... saving thousands and thousands of lives as" cars in use today are replaced with automated vehicles, he said.

Google is developing a fleet of automated vehicles. Most auto manufacturers are moving in that direction as well. Three states—Nevada, Florida and California—have authorized testing of automated cars on their roads. Legislation has been proposed in several other states and the District of Columbia.

The kinds of automated cars Google and most automakers envision

eventually bringing to market involve the driver ceding control of the vehicle to its computers—feet off the pedals and hands off the wheel—but still remaining ready to retake control if necessary, Strickland said. That means the driver would need to monitor the vehicle and what's going on outside it.

In a fully-automated vehicle, the driver would program a destination into the car's computers, but would not be expected to control the vehicle, he said.

"We know of no such vehicle being designed for civilian highway use at this time, but at some time in the future this may be the logical outcome for all the current efforts that are underway by manufacturers and other non-automotive company providers," Strickland said.

He declined to say when the government might propose safety standards for automated cars. Setting such standards would require the government to fundamentally rethink the way it evaluates auto safety, he said.

"We may have to depend on modeling and simulation of detailed traffic interactions that lead to crashes as opposed to the typical crash-testing model that we've used ... over the past 40 years," Strickland said.

Key questions will be whether the software in automated cars will be able to handle complicated driving situations and whether there will always need to be a human driver paying attention and ready to step in.

Besides reducing traffic deaths, automated cars may be an alternative for people like the elderly and the blind whose mobility is limited because they do not drive, he said.

"If this is done in a reliable and safe way it could be a game changer for that population," Strickland said.

Volvo used the gathering to showcase a new "traffic jam assistance system" that enables a car to automatically follow the vehicle ahead in slow-moving traffic up to 30 mph(50 kph). Volvo described the new system, which will be ready for production in 2014, as "another step on the journey toward ... self-driving vehicles."

Over the past decade, automakers have been gradually introducing automated safety features into cars, especially high-end vehicles. Forward-collision warning systems, for example, alert drivers when they are likely to crash into a car in front of them and, in some cases, will briefly take control of the vehicle away from the driver to apply the brakes.

The government is already testing "connected vehicle" technology in which cars continuously communicate over wireless networks with other similarly equipped vehicles, exchanging information on location, direction and speed 10 times a second within about 1,000 feet. A computer analyzes the information and issues danger warnings of impending collisions to drivers, often before they can see the other vehicle.

Still, automated cars "are not around the corner," Peter Mertens, Volvo's senior vice president of research and development, said. "There is more (public) acceptance needed."