Assessing System Implementation Readiness of the Driver Alcohol Assessing System
Implementation Readiness of the Driver Alcohol Detection System For Safety (DADSS) To
Reduce Alcohol-Impaired Driving in a Real-World Driving Pilot Deployment Project.

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Abstract
The Driver Alcohol Detection System for Safety Program – a joint effort of the National Highway Traffic Safety
Administration and the Automotive Coalition for Traffic Safety - has been developing unique, in-vehicle alcohol
detection systems to more effectively address the problem of alcohol-impaired driving. These technologies,
both breath-and touch-based, are intended to be seamless with the driving task, non-intrusive, accurate, fast,
reliable, durable, and require little or no maintenance. Now in Phase III of development, the breath- based
technology is ready for real-world road testing in a naturalistic setting in the State of Virginia, U.S.A. The Driven
to Protect Powered by DADSS initiative, is a partnership with the Virginia Department of Motor Vehicles
Highway Safety Office and the Automotive Coalition for Traffic Safety. As the technical and program
management lead, KEA Technologies, Inc. has instrumented and deployed a small fleet of pilot test vehicles to
examine the data from breath-based prototype sensors under various environmental, driver/user interaction,
and user demographics conditions. The alcohol detection system is known to be accurate, precise, reliable, and
maintainable based on laboratory and controlled test results. This pilot program seeks to obtain data from
naturalistic, uncontrolled test conditions. The pilot program will determine if: a) the system is generally accepted
by drivers, b) there are any technical modifications required to significantly improve the system, and c) the
system is ready for wider implementation in fleet, privately-owned, commercial, or other vehicles. Four 2015
Ford Flex “For Hire” commercial livery service vehicles have been instrumented with in-vehicle breath- based
alcohol detection sensors including supporting data collection and transmission systems. The Pilot Deployment
Project is ongoing with a goal of collecting at least 15,000 data points from the sensors. Lessons learned will be
used to refine the performance specifications, sensor technology, and data acquisition systems for future on-
road vehicle testing.