



US Ignite Comments on Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0

Docket Number DOT-OST-2019-0179

On behalf of US Ignite, thank you for the opportunity to submit the following comments in response to Docket Number DOT-OST-2019-0179 regarding the Department of Transportation (DOT) and the Office of Science and Technology Policy's report Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0 (AV 4.0). US Ignite appreciates the ongoing efforts of the US federal government to advance the development, deployment, and integration of automated vehicles (AV). We would like to use these comments to highlight the activities we are currently undertaking through our ongoing federal partnerships and express our eagerness to expand these efforts in support of the government's goals to safely and efficiently deploy these new technologies.

US Ignite is a catalyst for communications network advancement, and for innovation in smart community services that are powered by a new generation of technologies. With ongoing partnerships with the National Science Foundation (NSF), the National Institute for Standards and Technology (NIST), and the Department of Defense, US Ignite's work in the deployment of emerging transportation technology as a testbed facilitator and trusted partner in smart community development is unparalleled. Through these partnerships, US Ignite has created testbeds and pilot programs for the deployment of connected vehicles and infrastructure while also enabling researchers to conduct advanced research without having to spend capital to develop their own R&D infrastructure.

American cities today are grappling with a diverse set of complex problems: public safety, natural and manmade disasters, cybersecurity threats, increasing congestion, aging infrastructure, challenges with connectivity, air pollution, unemployment, increasing waste, access to mobility, increasing demands for limited energy, and increasing operational costs. The term "smart communities" is often applied to the use of new technology solutions to solve some of these problems. The foundation of any smart community will be a faster, lower latency, more sliceable wireless communications network. These networks, which are critical to the integration of new technologies such as autonomous vehicles and connected infrastructure, will require significant advances in wireless networking technology. US efforts to develop these technologies have been greatly accelerated with the creation of living laboratories where researchers and entrepreneurs can test, at scale in real cities, new technology including connected vehicles and infrastructure. US Ignite, in partnership with Northeastern University, manages the \$100 million Platforms for Advanced Wireless Research (PAWR) program (advancedwireless.org), funded by NSF and a consortium of 30 leading wireless networking and equipment companies. PAWR has facilitated the creation and manages four of these living laboratories in cities across the United States. Currently, US Ignite facilitates three testbeds in New York City, Salt Lake City, and the North Carolina Research Triangle, and will soon be awarding a fourth testbed dedicated to rural broadband deployment and accompanying applications, such as autonomous vehicles.

As part of our partnership at Ft. Carson, US ignite is working on multiple pilot AV deployments, including shuttle, delivery, and maintenance vehicles. What makes US Ignite's activities at Ft. Carson unique is the collection of comprehensive AV data. Very few pilots, if any, in the US or globally are deploying sensors, gathering vehicle data, and making that data available to researchers. The US Ignite project at Ft.

Carson is doing all of these things to support the development of best practices and expedite the development and deployment of smart transportation technologies at military installations.

The US Ignite Smart Gigabit Communities (SGC) project is a network of more than two dozen communities developing a catalog of applications and services to address smart city and IoT challenges. Many of the cities involved in the SGC program are interested in standing up smart infrastructure and AV testbeds. Building on this work, US Ignite worked collaboratively with NIST to help lead the Global Cities Team Challenge to develop best practices and standards for smart cities deployment. Included in these efforts, US Ignite and NIST worked collaboratively to support the development of standards for smart transportation and advance efforts by a number of cities to deploy AVs and smart infrastructure.

Through these and other projects, US Ignite has established itself as a uniquely capable developer and convener supporting the development of innovative technologies critical to the deployment and integration of AV technologies. US Ignite is encouraged by the emphasis on investing in enabling technologies included in the AV 4.0 report. Through our work in not only building and managing testbeds but also leading research and convening thought-leading consortia, US Ignite's efforts to advance wireless connectivity has and will continue to empower entrepreneurs and researchers. We are eager to continue our work with NSF and DOD and hope to expand our partnerships with other agencies to advance the important work being done in advanced wireless. According to AV 4.0, "Wireless technologies that complement the capabilities of automated vehicle technologies are a priority of the current administration." US Ignite is uniquely positioned in this space and we hope to support these efforts further.

For more information on US Ignite and our ongoing efforts, please visit our website at <https://www.us-ignite.org/>.