

We have written several studies on the national security benefits of manufacturing autonomous vehicles in the United States, and are writing in support of GM and Cruise's petition to NHTSA for the "Cruise Origin" (Docket No. NHTSA-2022-0067).

The United States faces many challenges in manufacturing leadership, its place in the global economy, and its role in setting global standards for new technologies. Autonomous vehicles (AVs) are a way to highlight innovations like artificial intelligence which could strengthen U.S. technology leadership and improve road safety.

In the past few years, the United States has begun to address its decades-long shortfall in public investment in research and development (R&D). For years, the Department of Defense was a primary funder for R&D, but innovation has now moved to the private sector and is focused on commercial markets. This means that commercial innovation has become the primary source of qualitative advantage for national security. Realizing the national security and economic benefits of autonomous vehicles requires deployment at scale. Federal regulation remains a barrier to production and deployment at scale of autonomous vehicles.

In our research, CSIS has examined the value of this technology and also explored the risks of falling behind China in this strategic industry. It has also looked at the potential benefits that accelerated deployment of autonomous vehicles could have on US competitiveness and national security:

- **Military Applications:** having a strong Autonomous vehicle sector, with its potential application for military use is essential for national security, given the growing role for AI and autonomy in weapons and operations.
- **Protection from Cybersecurity Risks and Vulnerabilities:** The hardware and software behind AVs create a range of opportunities for hackers, and it would be safer to have a car industry that is not located in a hostile country.
- **Tech Competition:** Leadership in innovation and technology is central to global influence, prestige, and power. AVs are at the cutting edge of technology and can play a crucial role in future U.S. influence and leadership.
- **AVs and the Auto Industry:** The transition to autonomous, electric vehicles is driving transformation within the auto industry that can bridge the divide between high-tech innovation hubs and those regions where manufacturing has—or had—traditionally dominated economic activity. This includes new auto manufacturing clusters for batteries, chips and factory upgrades, as well as software for imaging, robotics, navigation, connectivity, data processing and AI.
- **Benefits of Deploying Autonomous Vehicles:** AVs are expected to improve road safety, ease traffic congestion and reduce the emission of pollutants. Efficiency will be created through route optimization, traffic management, incident management and

improved road safety. Climate benefits of these efficiencies will be critical to further reduce emissions and energy needs. .

NHTSA can play a critical role in facilitating these positive outcomes for the United States by approving this temporary exemption request, providing an initial pathway to scale for the Origin and ensuring that Americans can benefit from this sustainable transportation technology. We support efforts that improve American competitiveness in autonomous technologies on these issues and urge NHTSA to approve a path for new technologies (like the Origin) solutions at scale.

Sincerely,

*William Reinsch and James A Lewis*