

September 19, 2017

Secretary Stephanie Pollack
Chair, Automated Vehicles Working Group
Department of Transportation
10 Park Plaza, Suite 4160
Boston, MA 02116

RE: Testimony Regarding Automated Vehicles in Massachusetts

Dear Chairwoman Pollack & Members of the Working Group,

Thank you for the opportunity to address the Committee on the importance of building a supportive environment for the growth and development of automated vehicle (AV) technology in Massachusetts.

My name is Tom Hopcroft and I represent the Massachusetts Technology Leadership Council (MasTLC), the state's largest non-profit technology industry association – more than half of the people working in tech in Massachusetts work for one of our member companies. Our mission is to accelerate innovation and growth in the Commonwealth. I also sit on the board of MassRobotics.

Massachusetts is a leading state for technology innovation. We have over 300,000 people employed in the tech sector and another 100,000 in tech occupations across other sectors. Together tech represents 11.5% of all jobs and 21.5% of the payroll in Massachusetts. Add the support (or multiplier) jobs, and tech underpins 34.1% of all jobs, 43.9% of payroll, and 33.9% of the gross state product. In addition to having critical mass, tech is growing, adding close to 10,000 new jobs last year. In many ways, tech is the golden goose for our economy – a large, growing sector, that is increasingly powering every other sector. (source: forthcoming MasTLC State of Tech Economy Report 2017)

Massachusetts has been innovating for close to 400 years – we created the first colonial college, the first public park, the first American subway, the telegraph, the telephone, the Internet, and more. Brainpower is our natural resource. Other parts of the country may have energy, iron, or agriculture. But for Massachusetts, our natural resource is our innovation capacity. We have over 114 colleges and universities, over half our workforce has a college degree, we have capital and a

functional state government. We are leaders in robotics, the internet of things, artificial intelligence, machine learning, advanced manufacturing and more.

A variety of macro trends are coming together creating uncertainty and opportunity. For instance, the pace of innovation is accelerating as technologies converge, platforms emerge, and network effects are achieved. Labor markets are changing as Boomers retire, Millennials begin to have families, and the population concentrates in urban centers. Municipalities are threatened with declining revenues as ridesharing and electric vehicles (EV) reduce parking, traffic violation and gas tax revenues, disproportionately shifting the burden of supporting our infrastructure to those who can least afford it. With all this change comes opportunity.

Massachusetts has an innovation legacy and capacity that has positioned us well to capture this opportunity and lead in the [\\$7 trillion automated vehicle market](#); and others before me have spoken to the incredible research, development, and testing that is already taking place. They've also talked about the many other regions that are aggressively competing to lead. We have the innovation capacity to lead and the political will, as evidenced by this Working Group, to support AVs in Massachusetts. We need to balance innovation with consumer protection, but we must be careful not to use AV legislation as a vehicle to advance other priorities that could have the unintended consequence of playing into the hands of another region that is seeking to overtake our lead.

Take Electric Vehicles (EVs) for example. The 2008 Global Warming Solutions Act requires Massachusetts to achieve greenhouse gas emissions reductions of 25% below 1990 emissions levels by 2020 and a reduction of at least 80% by 2050. We're making great progress, having achieved a 21.3 % reduction as of 2014, and we're thrilled to see that a couple of our AV companies are in fact testing on EV platforms. Stands to reason, therefore that if we require AVs to be EVs that it would drive greater EV adoption. Instead, this coupling disadvantages AV companies in Massachusetts, supporting the growth of competing AV clusters and possibly costing us the opportunity to be the innovation leader in this new area. We therefore do not support the coupling of EVs with AVs, but encourage lawmakers to consider other levers to independently encourage the adoption of EVs while supporting the development of AVs.

The Vehicle Miles Traveled (VMT) tax is another example. As we transition all vehicle to EVs, a VMT tax could be more equitable than a gas tax as a mechanism for distributing infrastructure investment more equitably. A VMT tax could also create potential policy levers to incentivize desired behavior – for example, we might exempt the first million miles traveled by AVs to attract and support testing and deployment in MA; Other discounts could be made for zero emission vehicles, multiple passengers, off peak usage, usage in areas underserved by public transit, lower income, lighter vehicles, etc. Again, coupling VMT with AVs may seem attractive on the surface but could jeopardize our ability to foster the growth of AVs in MA. We therefore do not support the coupling of VMTs with AVs. We do not oppose moving to a VMT for all vehicles.

Steve Case of AOL fame once asked the question, “Do you know where the technological capital of the world was 75 year ago?” The answer was Detroit during the automotive heyday when all the best talent was heading there to be part of the newest innovative technology boom. The point he continued was to not look at places like Silicon Valley (or Rt 128) in terms of “snapshots” but rather as motion pictures. These regional economic clusters ebb and flow based on a myriad of inputs – talent, capital, policies, etc. -- that come together in a delicate balance to enable an innovation cluster to flourish.

As a result of our robotics and artificial intelligence leadership, our “brainpower” and our innovation capacity, Massachusetts has seen significant AV research and development at our colleges and universities as well as in government and private research labs. Until recently, testing was done outside the state in places as far away as Singapore. We led in the mainframe and mini computer era, gave up our leadership to Silicon Valley in the PC and Web 2.0 era, and have an opportunity to regain our leadership in this next wave of innovation.

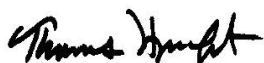
AVs are a significant market and are a key part of an inflection point at the dawn of the Fourth Industrial Era, an era characterized by the instrumentation and automation of our physical world. Massachusetts is poised to lead in this Fourth Industrial or Internet of Things (IoT) era. The loss of our AV leadership would be devastating to our ability to lead in this next era as well.

In closing, we are in a really exciting time of change. As a leading innovation state, we are well poised to benefit greatly by out innovating our peers – something that we are quite capable of doing.

We urge the Working Group to recommend the development of policies that attract and support AV companies, while balancing essential consumer protections, and to avoid creating policies that might burden AV companies by coupling AV legislation with other state interests. A mere perception of limitations, red tape, or other burden, when coupled with other region’s pro-AV policies and active courting could determine whether we can be a leader in one of the most important technological shifts of our time.

We urge policymakers to take a light hand in legislation and focus on fostering responsible innovation while balancing consumer protection.

Sincerely,



Thomas Hopcroft
President & CEO