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MOBILITY IN THE AGE OF AI

Mobility can be broadly defined as the movement of people, goods and information, and is consciously used here as a catchall term to describe a rapidly evolving ecosystem. Advancements in machine learning, artificial intelligence (AI), big data and connected systems (Internet of Things-IoT), applied against a backdrop of increased social and cultural acceptance of new technologies (such as autonomous systems, as well as enhanced capabilities of electric batteries and power/communications systems), as well as new economic models (such as the shared economy and Robot as a Services (RaaS) business models), have led to an unprecedented disruption of industries within the mobility ecosystem.

These industries range from automotive, rail, shipping, aviation industries to last-mile logistics and commercial space – essentially, any industry that builds or supports vehicles or systems that move on or through land, air, sea and space.

It is difficult to ignore the changing mobility landscape. For perspective, market forecasts predict that the IoT market alone will grow to \$267 billion by 2020 and \$640 Billion by 2022, and that as much as half of the IoT market will be attributable to spending on discrete manufacturing, transportation and logistics.

Despite these optimistic projections, full realization of the beneficial potential of this new era of mobility will be impossible unless industry participants give adequate priority and attention to critical policy issues related to system functionality/safety, data rights, security/rogue users, and product liability that, if left unaddressed, will become a barrier to widespread and sustainable adoption of these technologies. Specifically, industry participants should consider the following.

- System Functionality; Safety. “Is it safe?”** This is the threshold question asked by those interacting with any autonomous or AI-enabled mobility technology. The question of safety is challenging, because the definition of safety is relative and tied to a particular community’s risk tolerance. A data-driven, design-centered and consensus-based narrative for system safety is critical in order for industry to demonstrate that a system is safe, and to gain the trust of the system’s end users, evaluators and critics.

- Data Rights.** Autonomous mobility systems are powered by data. In the current climate of regulatory variability and legal uncertainty related to data rights and usage, industry stakeholders in the mobility space are encouraged to understand their legal obligations and collaborate with other stakeholders as appropriate to develop industry best practices related to the collection and use of data.

- Security/Rogue Users.** With the growing sophistication and frequency of cybercrime, and the ability for criminal actors to weaponize robots, the widespread adoption of autonomous mobility systems creates new opportunities for unprecedented attacks with potentially disastrous outcomes. Industry stakeholders should develop best practices for designing secure systems, identifying and eliminating system vulnerabilities, mitigating damages in the event of security incidents, and enabling law enforcement to identify and prosecute rogue actors efficiently.

- Product Liability.** The advent of autonomy raises significant questions related to product liability, particularly as systems move towards full autonomous decision-making. When an incident involving an autonomous system leads to injury or damages, however, who is to blame? This is largely an open question, and such questions will need to be addressed and resolved, likely with involvement from insurance companies, in order for industry stakeholders to understand their liability exposure.

Industry Confidence

One of the greatest killers of nascent technology is industry uncertainty, and such uncertainty is often caused by a lack of consensus over what rules should apply. While over-regulation in the early days of an emerging market can stifle technological progress and innovation and often draws ire from the technologists, the lack of a coherent regulatory and legal framework thoughtfully tailored to the unique needs of an industry can paralyze long-term progress.

Many of the above-described challenges facing the autonomous mobility ecosystem can be addressed by industry stakeholders working together with one another and alongside regulators and policymakers to architect sound standards and policies that promote safe and beneficial technology innovation designed for that industry. In order for humans to reap the full benefits of autonomous mobility technologies, a balance must be struck between encouraging technological innovation and minimizing its risks. In short, the flywheel of autonomous mobility is turning, but industries must act now to help build a policy environment that will help carry the flywheel into a positive era of mobility.

For more information regarding these issues, contact Justine M. Kasznica, shareholder in Babst Calland’s Mobility, Transport and Safety practice at (412) 394-6466 or jkasznica@babstcalland.com.

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