

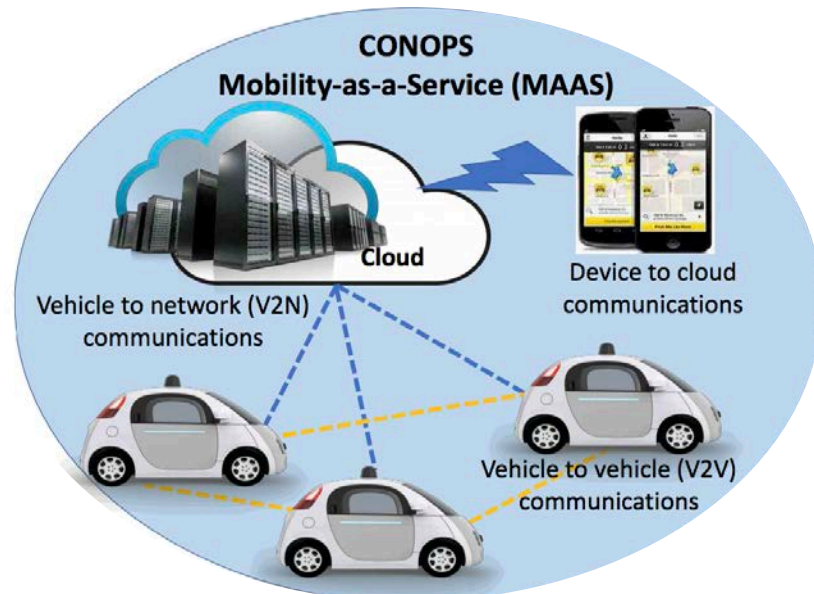
Cybersecurity at MIT Sloan brings thought leaders from industry, academia and government together with MIT faculty, researchers and students to address strategy, management, governance and organization of cybersecurity of critical infrastructure using an interdisciplinary approach.

*Mobility as a service
has many benefits
but the cyber risk is
equally high.*

Managing Cyber Risk in Autonomous Vehicles

The quickly growing “mobility as a service” (MAAS) industry is poised to take over a large share of the transportation market. It has enormous value: saving time, energy, and resources are just a few of the ways MAAS will benefit society. However, safety continues to be a big concern. We know that manned vehicles can be used as deadly weapons and autonomous vehicles can be misused for widespread attacks as research has shown that these cars can be hacked and remotely controlled.

This project uses a systems view to analyze cybersecurity risk of autonomous vehicles, that we call Cybersafety, based on System Theoretic Process Analysis-Security (STPA-Sec). A systems approach is the key because it includes socio-technical components, the changing nature of accidents and attacks, increased system complexity, and the role of autonomous vehicles within a larger ecosystem. Manufacturers, consumers, regulators and the larger ecosystem all want to ensure cybersafety from the very beginning.



Connections between autonomous vehicles make them more useful, but also more dangerous

IMPACT: For autonomous vehicles to reach their full potential, cybersecurity vulnerabilities must be identified and addressed. This research uses a systematic approach to insure that safety of MAAS is solved as autonomous vehicles and MAAS gain popularity.

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