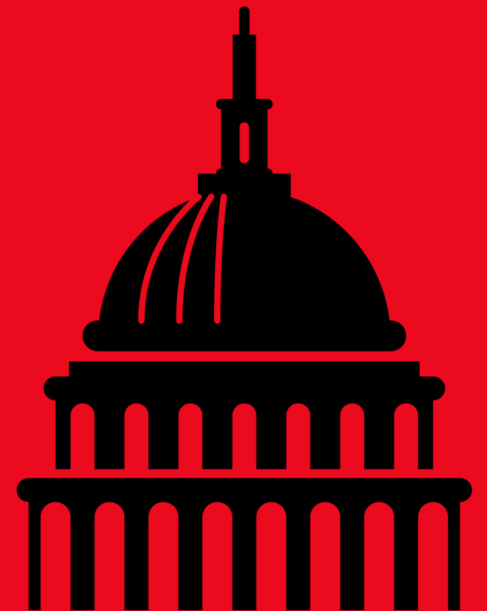


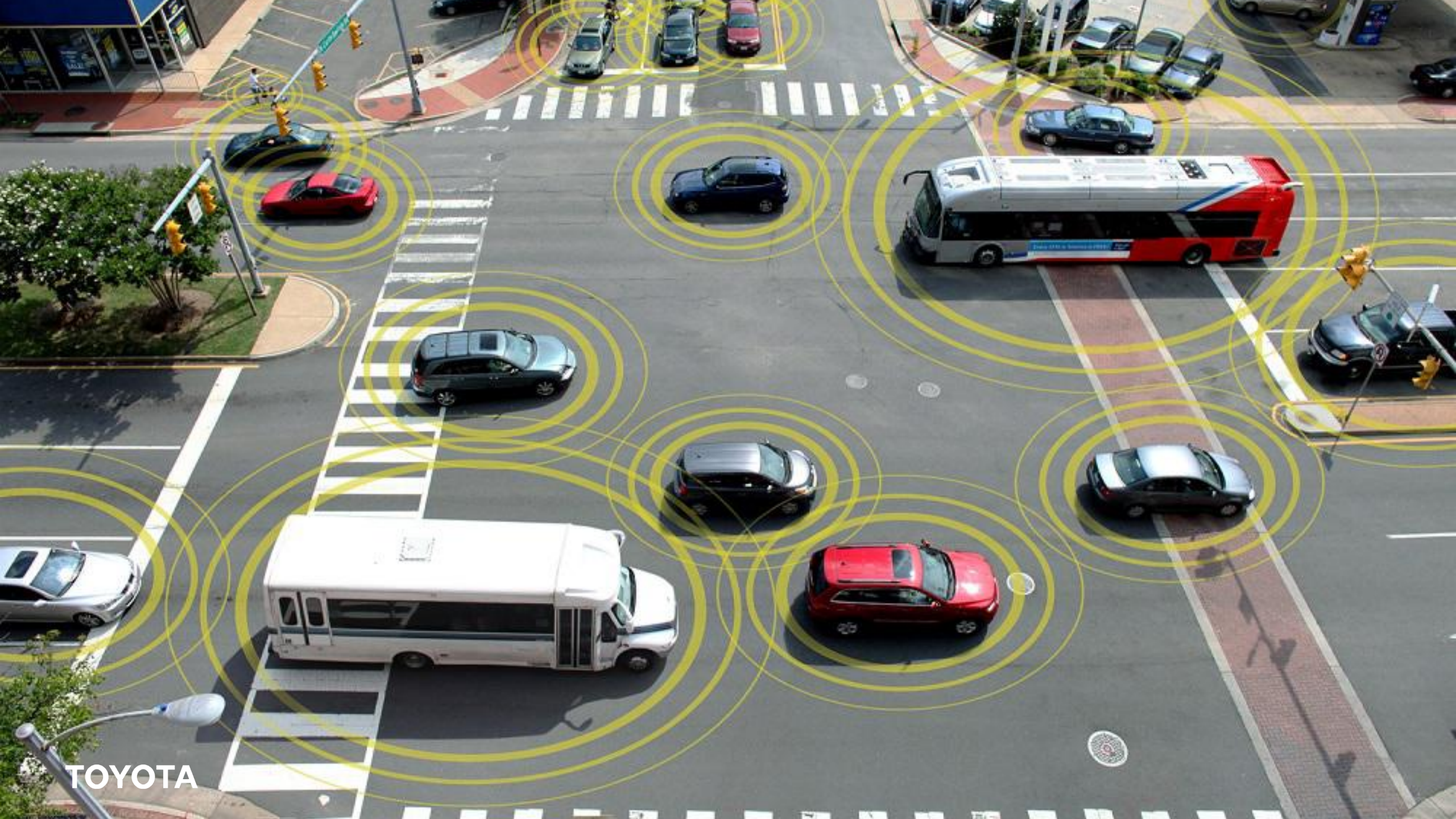
Securing Vehicles, Securing Trust

Rebecca Steele

Director, Emerging Technologies Policy
Government Affairs

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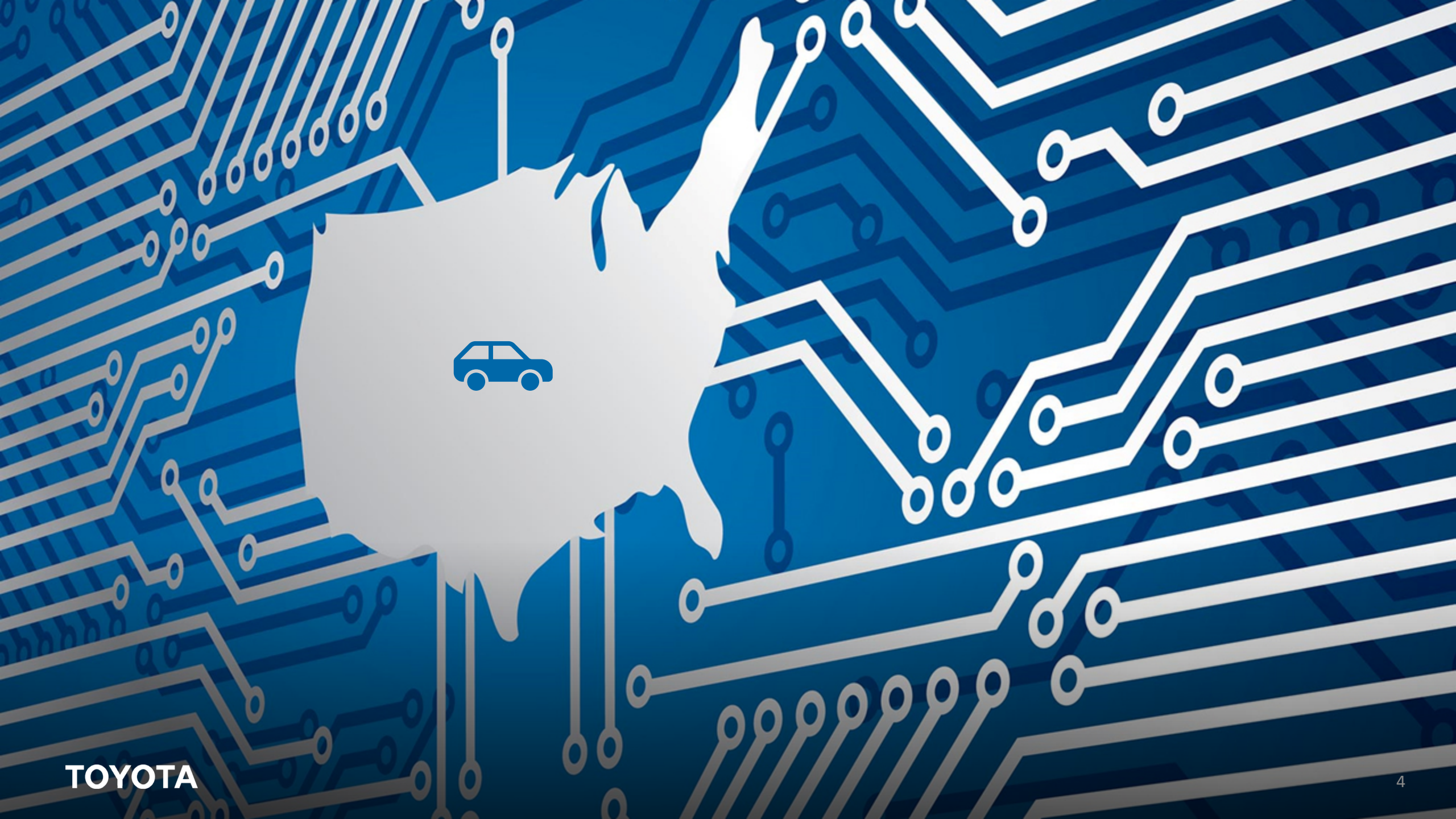


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Security → Trust

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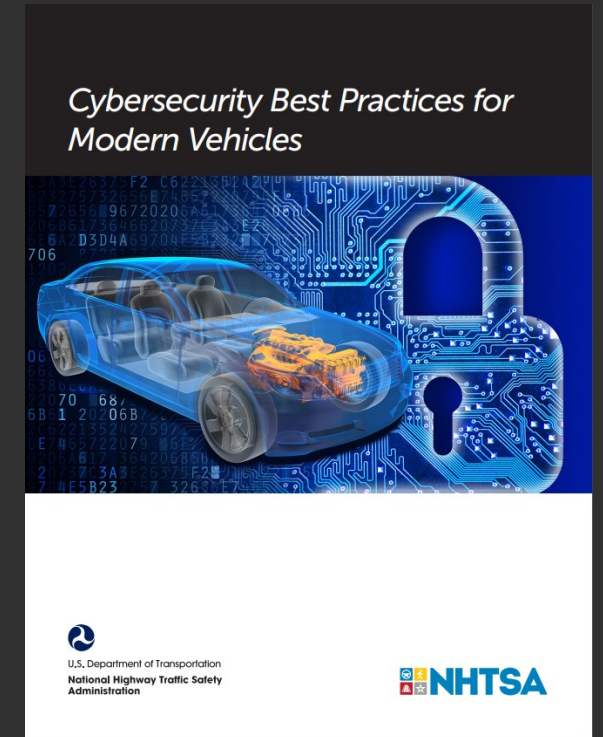
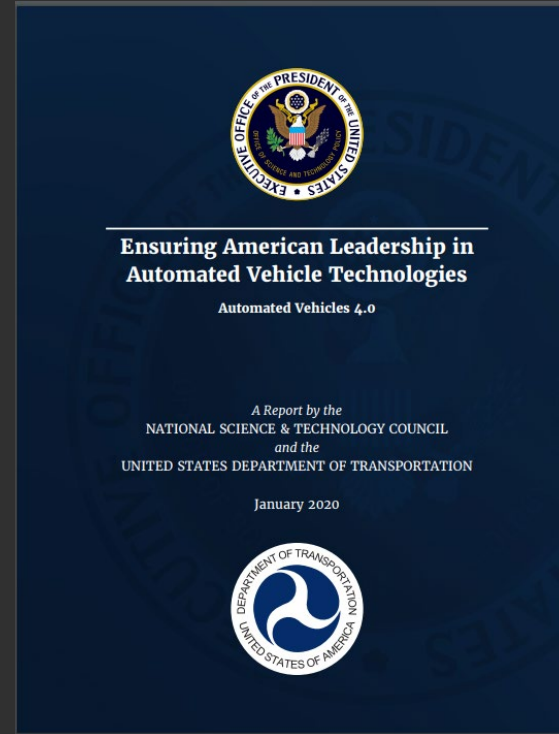
Currently, there are **no federal cybersecurity regulatory standards** that apply to passenger vehicles in the U.S.



Guidance



NIST



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Best Practice Guides

- Developed by automotive industry
- Forward-looking guidance
- Neither prescriptive nor restrictive



Standards

- ISO/SAE 21434: Road Vehicles - Cybersecurity Engineering
- SAE J3061: Cybersecurity Guidebook for Cyber-Physical Vehicle Systems





Keys to Vehicle Cyber Security Policy

- Non-prescriptive
- Evolve as threats and security best practices change
- Encourage info-sharing and communities of defense

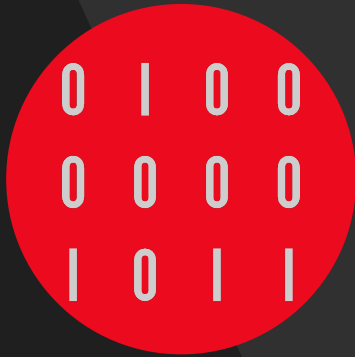


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Road Ahead

- Updated NHTSA Guidance
- Legislation
- UNECE: WP. 29

Trends



Data



Labeling



Supply Chain
Security

Why this matters?

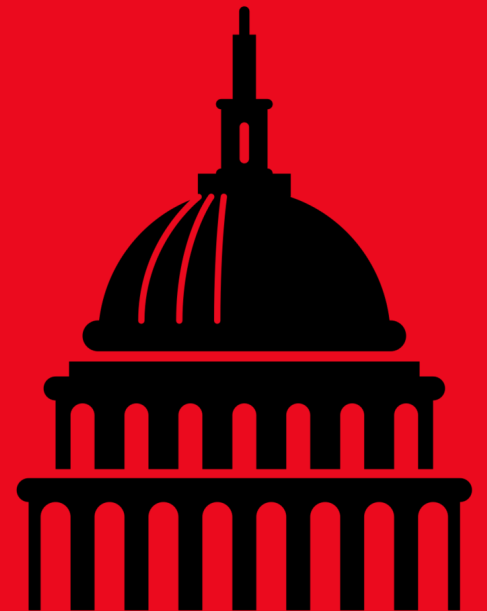


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NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

DOCKET NO. NHTSA-2016-0040

NHTSA Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Automated Safety Technologies

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

“If a manufacturer fails to provide secure updates to a software system and that failure results in a safety risk, NHTSA may consider such a safety risk to be a safety-related defect compelling a recall.”

Security Requirements Overview

Each requirement is coloured according to its importance.



LEGISLATION

SPY Car Act of 2015	SPY Car Study Act of 2017	Vehicle and Roadway Safety	Senate Bills 927 & 928	GDPR	DMCA	ACDC	SELF DRIVE Act	AV START Act	AEV Act	UK DCMS Security by Design Legislation	EU Cybersecurity Act 2019/881	Mind Your Own Business Act	UN Regulation on Cyber Security	UN Regulation on Software Updates	Japan Road Vehicle Act
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INDUSTRY STANDARDS

SAE J3061	SAE J3101	SAE J3138	ISO 26262-2:2018	ISO 15031-7	ISO 20828	Secure Coding Standards	NIST FIPS 140-2	NIST FIPS 180-4	NIST FIPS 199	ISO/IEC 15118	ISO/IEC 27001	ISO/IEC 27002	ISO/IEC 27010	ISO/IEC 27018	ISO/IEC 27035	ISO/IEC 27701	ISO/IEC 29100	ISO/IEC 29101	ISO/IEC 9797
ISO/IEC 15026	ISO/IEC 30111	ISO/IEC 15408	ISO/IEC 11889	ISA/IEC 62443	ISO/SAE 21434	Certificate Policy for EU C-ITS	IEEE 1609.2	PAS 1885: 2018	SAE J2931/7	NISTIR 8200	NIST Cyber security	ETSI TS 103 645	ETSI TS 133 501	CCC Digital Key	RCAR VKM	IFAA Digital Car Key	JasPar Vehicle Security Standards	SAE EV Charging Station Security	NIST Privacy Framework



BEST PRACTICE

Consumer Privacy Protection Principles	Framework for Automotive Cybersecurity	Auto-ISAC Best Practices	DfT Key Principles of Cyber Security for CAV	OWASP Top Ten Proactive Controls	OWASP ASVS	FTC IoT Privacy & Security	GSMA IoT Security Guidelines	NIST SP 800-30	NIST SP 800-61	NIST SP 800-121	NIST SP 800-137	NIST SP 800-150	NIST SP 800-63-3	NHTSA Federal Automated Vehicles Policy	NHTSA Cybersecurity BP for Modern Vehicles	ENISA Cybersecurity and Resilience of Smart Cars
UNECE WP.29 Guidelines	DHS Strategic Principles for Securing the IoT	NIST SP 800-160	CRYPTREC Crypto Technology Guideline	FASTR Secure OTA Updates	ACEA Principles of Automobile Cybersecurity	ENISA Baseline Security for IoT	NHTSA ADS 2.0	NHTSA AV 3.0	TISAX	Safety First For Automated Driving	NISTIR 8259	ENISA Good Practices for Security of IoT	ENISA Good Practices for Security of Smart Cars	EDPB Guidelines on Vehicle Personal Data	FMCSA Heavy Vehicles Best Practice	Canada's Vehicle Cyber Security Guidance

Q2 2020

Importance:

Low

Medium

High