



441 G St. N.W.  
Washington, DC 20548

Comptroller General  
of the United States

July 12, 2022

The Honorable Pete Buttigieg  
Secretary  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

**Priority Open Recommendations: Department of Transportation**

Dear Mr. Secretary:

The purpose of this letter is to provide an update on the overall status of the Department of Transportation's (DOT) implementation of GAO's recommendations and to call your personal attention to areas where open recommendations should be given high priority.<sup>1</sup> In November 2021, we reported that on a government-wide basis, 76 percent of our recommendations made 4 years ago were implemented.<sup>2</sup> DOT's recommendation implementation rate was also 76 percent. As of April 2022, DOT had 167 open recommendations. Fully implementing these open recommendations could significantly improve DOT's operations.

Since our June 2021 letter, DOT has implemented two of our 16 open priority recommendations. Specifically, the Federal Aviation Administration (FAA) has taken steps to:

- assess the effectiveness of its Runway Safety Program;<sup>3</sup> and
- improve oversight of the use of its Compliance Program—an enforcement policy that encourages use of training, collaboration, and other tools to address safety violations.<sup>4</sup>

We ask for your continued attention to the remaining 14 priority recommendations. We are also adding two new recommendations related to assessing skill gaps in key occupations that oversee the safety of automated technologies and increasing climate resilience of federally

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<sup>1</sup>Priority recommendations are those that GAO believes warrant priority attention from heads of key departments or agencies. These recommendations are highlighted because, upon implementation, they may significantly improve government operation, for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a high-risk or duplication issue.

<sup>2</sup>GAO, *Performance and Accountability Report: Fiscal Year 2021*, [GAO-22-4-SP](#) (Washington, D.C.: Nov. 15, 2021).

<sup>3</sup>GAO, *Aviation Safety: Opportunities Exist for FAA to Improve Airport Terminal Area Safety Efforts*, [GAO-19-639](#) (Washington, D.C.: Aug. 30, 2019).

<sup>4</sup>GAO, *Aviation Safety: Actions Needed to Evaluate Changes to FAA's Enforcement Policy on Safety Standards*, [GAO-20-642](#) (Washington, D.C.: Aug. 18, 2020).

funded roads. This brings the total number of current priority recommendations to 16. (See the enclosure for the list of recommendations and actions needed to implement them.)

The 16 priority recommendations fall into the following six major areas:

**1. Developing Comprehensive Plans.** Comprehensive planning can help ensure that agencies achieve their priorities and manage risks. Such planning would help DOT (1) better prepare the aviation sector for future communicable disease threats and (2) respond to safety and infrastructure challenges related to automated vehicles. By implementing these two priority recommendations, DOT would be better positioned to address these critical issues.

**2. Addressing Safety Risks.** The nation's surface transportation system, vital for the economy, faces a variety of challenges, including risks to the safety of roads and natural gas pipelines. Implementing the three priority recommendations in this area would help improve DOT's safety oversight for: (1) automobiles, by ensuring that DOT uses accurate and sufficient motor carrier data; (2) the transportation of liquefied natural gas, by requiring DOT to review regulations; and (3) automated technologies, by directing DOT to assess skill gaps in its related workforce.

**3. Reducing Fraud and Abuse Risks.** Proactively managing risks, including fraud and abuse, helps ensure taxpayer dollars and government services are being used for their intended purposes. FAA's U.S. aircraft registry can help with criminal, national security, or safety investigations. Registry fraud and abuse hinders the ability of law-enforcement and safety officials to use the registry to identify aircraft and their owners who might be involved in illicit or unsafe operations. By implementing the two priority recommendations in this area, through (1) verifying applicants' and dealers' registration eligibility and information and (2) increasing aircraft registration and dealer fees, FAA would address potential risks of fraud and abuse in the aircraft registration process and ensure there are appropriate resources available for verifying applicant information.

**4. Improving Transparency and Communication.** Agencies can ensure the accountability of policy and program decisions by increasing transparency through expanding public access to information. Implementing the five priority recommendations in this area would increase the transparency of DOT's decisions and rationales to the public and stakeholders while maintaining discretion. For example, one of these recommendations addresses the need for clearer guidance for discretionary grant programs. According to officials, DOT is in the process of finalizing new guidance for discretionary grants.

Other actions DOT should take to implement the five priority recommendations in this area include (1) obtaining further information to better inform decisions on whether to investigate potentially unfair or deceptive practices in the air ambulance industry; (2) requiring better documentation and more clarity in classifying projects as highway emergency repairs; (3) documenting and sharing details of its decision-making process for changing new car safety assessments; and (4) documenting and sharing its decision and rationale regarding the inclusion of pedestrian safety tests in its New Car Assessment Program.

**5. Managing Cybersecurity Risks and Information Technology (IT).** Federal agencies and our nation's critical infrastructures—including transportation systems—are dependent on IT systems and electronic data to carry out operations and to process, maintain, and report essential information. The security of transportation systems and data is vital to public safety and national security. By implementing the three priority recommendations in this area, which include (1) determining the level of cybersecurity framework adoption; (2) fully developing a

cybersecurity risk management strategy; and (3) addressing shortfalls in IT workforce-planning, DOT could improve cybersecurity across the transportation sector.

**6. Improving Climate Resilience.** Changes in the climate pose a risk to the safety and reliability of the U.S. transportation system, and climate-related damages to paved roads may cost up to \$20 billion annually by the end of the century.<sup>5</sup> We made one recommendation in this area, identifying 10 options for the Federal Highway Administration (FHWA) to further enhance the climate resilience of federally funded roads, such as integrating climate resilience into agency policy and guidance. Implementing this priority recommendation would help DOT manage risks to federal investments in U.S. roads posed by climate change and improve the safety and reliability of the U.S. transportation system.

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In March 2021, we issued our biennial update to our [High-Risk List](#), which identifies government operations with greater vulnerabilities to fraud, waste, abuse, and mismanagement or the need for transformation to address economy, efficiency, or effectiveness challenges.<sup>6</sup> One of our high-risk areas, funding the [nation's surface transportation](#), requires congressional action to develop a sustainable plan while also centering on DOT and the agency's ability to maximize existing resources.

Several other government-wide high-risk areas also have direct implications for DOT and its operations. These include (1) [ensuring the cybersecurity of the nation](#), (2) [improving the management of IT acquisitions and operations](#), (3) [improving strategic human capital management](#), (4) [managing federal real property](#), and (5) [government-wide security clearance process](#).<sup>7</sup> We urge your attention to funding the nation's surface transportation and other government-wide, high-risk issues as they relate to DOT. Progress on high-risk issues has been possible through the concerted actions and efforts of Congress, the Office of Management and Budget, and the leadership and staff in agencies, including DOT.

Copies of this report are being sent to the Director of the Office of Management and Budget and appropriate congressional committees including the Committees on Appropriations, Budget, Commerce, Environment and Public Works, and Homeland Security and Governmental Affairs, United States Senate, and the Committees on Appropriations, Budget, Transportation and Infrastructure, and Oversight and Reform, House of Representatives.

In addition, the report will be available on the GAO website at <http://www.gao.gov>.

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<sup>5</sup>According to the 2018 *Fourth National Climate Assessment*, changes in the climate pose a risk to the safety and reliability of the U.S. transportation system. See U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment*, vol. 2 (Washington, D.C.: 2018).

<sup>6</sup>GAO, *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021).

<sup>7</sup>With regard to cybersecurity, we also urge you to use foundational information and communications technology supply chain risk management practices set forth in our December 2020 report: GAO, *Information Technology: Federal Agencies Need to Take Urgent Action to Manage Supply Chain Risks*, [GAO-21-171](#) (Washington, D.C.: Dec. 15, 2020).

I appreciate DOT's commitment to these important issues. If you have any questions or would like to discuss any of the issues outlined in this letter, please do not hesitate to contact me or David Trimble, Managing Director, Physical Infrastructure, at [TrimbleD@gao.gov](mailto:TrimbleD@gao.gov) or 202-512-2834. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Our teams will continue to coordinate with your staff on all of the 167 open recommendations, as well as those additional recommendations in the high-risk areas for which DOT has a leading role. Thank you for your attention to these matters.

Sincerely yours,

A handwritten signature in black ink that reads "Gene L. Dodaro". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Gene L. Dodaro  
Comptroller General  
of the United States

Enclosure(s) – 1

cc:

The Honorable Shalanda Young, Director, OMB  
Dr. Steven Cliff, Administrator, National Highway Traffic Safety Administration  
Billy Nolen, Acting Administrator, FAA  
Stephanie Pollack, Deputy Administrator, FHWA  
Robin Hutcheson, Deputy Administrator, Federal Motor Carrier Safety Administration  
Tristan Brown, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration  
Gary Middleton, Office of the Secretary, DOT

Enclosure

## Priority Open Recommendations: Department of Transportation (DOT)

### 1. Developing Comprehensive Plans.

*Air Travel and Communicable Diseases: Comprehensive Federal Plan Needed for U.S. Aviation System's Preparedness.* [GAO-16-127](#). Washington, D.C: December 16, 2015.

**Recommendation:** To help improve the U.S. aviation sector's preparedness for future communicable disease threats from abroad, the Secretary of Transportation should work with relevant stakeholders, such as the Department of Health and Human Services (HHS), to develop a national aviation-preparedness plan for communicable disease outbreaks. Such a plan could establish a mechanism for coordination between the aviation and public health sectors and could provide clear and transparent planning assumptions for a variety of types and levels of communicable disease threats.

**Action Needed:** Initially, DOT partially concurred with this recommendation. Agency officials agreed that an aviation-preparedness plan is needed, but noted that HHS and the Department of Homeland Security (DHS) have responsibility for communicable disease response and preparedness planning, respectively, and that these departments should lead any efforts to address planning for communicable disease outbreaks, including for transportation. However, in March 2022, DOT changed its position and plans to take the lead, working closely with HHS and DHS, to develop an aviation-preparedness plan. To develop this plan, DOT will leverage existing interagency guidance issued during the COVID-19 pandemic. According to DOT officials, the agency intends to complete and implement the preparedness plan in early 2023.

To fully implement the recommendation, DOT should develop an aviation-preparedness plan that incorporates such things as protocols for responding to disease threats and coordination among stakeholders. Such a plan could help maximize an effective response to a public health threat, while minimizing potential inefficiencies in the national response effort and unnecessary disruptions to the national aviation system.

**Director:** Heather Krause

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*Automated Vehicles: Comprehensive Plan Could Help DOT Address Challenges.* [GAO-18-132](#). Washington, D.C.: November 30, 2017.

**Recommendation:** The Secretary of Transportation should develop and implement a comprehensive plan to better manage departmental initiatives related to automated vehicles. This plan should include leading principles such as goals, priorities, and steps to achieve results, milestones, and performance measures to track progress.

**Action Needed:** DOT agreed with this recommendation. In January 2022, DOT announced six "innovation principles" that will guide the formulation of its approach to automated vehicles. However, as of May 2022, DOT has not finalized and implemented a comprehensive plan. To fully address this recommendation, DOT needs to incorporate leading principles of comprehensive planning, such as goals and performance measures, into its efforts. Until these principles are incorporated, it continues to be unclear whether DOT is adequately evaluating automated vehicle challenges.

**Director:** Elizabeth Repko

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## 2. Addressing Safety Risks.

*Federal Motor Carrier Safety: Modifying the Compliance, Safety, Accountability Program Would Improve the Ability to Identify High Risk Carriers.* [GAO-14-114](#). Washington, D.C.: February 3, 2014.

**Recommendation:** To improve the Compliance, Safety, Accountability program, the Secretary of Transportation should direct the Federal Motor Carrier Safety Administration's (FMCSA) Administrator to revise the Safety Measurement System (SMS) methodology to better account for limitations in drawing comparisons of safety performance information across carriers. In doing so, the Secretary of Transportation should direct the FMCSA Administrator to conduct a formal analysis that specifically identifies limitations in: (1) the data used to calculate SMS scores including variability in the motor carrier population and the quality and quantity of data available for carrier safety performance assessments, and (2) the resulting SMS scores, including their precision, confidence, and reliability for the purposes for which they are used.

**Action Needed:** FMCSA did not agree with this recommendation, and has requested that we close the recommendation as not implemented. However, in response to a similar 2017 review by the National Academy of Sciences, FMCSA developed and tested a new methodology to compare safety performance across motor carriers. We believe the changes made could account for the data and other limitations we identified in our report. However, as of May 2022, FMCSA has not made a final determination on when it plans to implement the methodology.

To fully implement this recommendation, FMCSA should ensure that the methodology used to compare safety performance across motor carriers addresses the limitations we identified. Without a new methodology, FMCSA's ability to target unsafe motor carriers is hindered by insufficient information not accounted for in the current SMS methodology, such as variability in the carrier population.

**Director:** Elizabeth Repko

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*Natural Gas Exports: Updated Guidance and Regulations Could Improve Facility Permitting Processes.* [GAO-20-619](#). Washington, D.C.: August 6, 2020.

**Recommendation:** The Administrator of Pipeline and Hazardous Materials Safety Administration (PHMSA) should conduct a standards-specific review of regulations that incorporate standards and, if necessary, update the regulations or document its decision for not updating them.

**Action Needed:** PHMSA agreed with this recommendation. As of March 2022, DOT officials told us that the agency is developing a proposed rule that would incorporate updated standards that it would issue in September 2022. To fully implement this recommendation, the agency should complete its standards-specific review and update the regulations as necessary. A standards-specific review considers updates to technical standards used by federal agencies to ensure the safe design and operation of export facilities for liquefied natural gas. Without

reviewing and updating regulations, PHMSA cannot ensure its regulations remain effective at ensuring safety.

**Director:** Frank Rusco

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*Automated Technologies: DOT Should Take Steps to Ensure Its Workforce Has Skills Needed to Oversee Safety.* [GAO-21-197](#). Washington, D.C.: December 18, 2020.

**Recommendation:** The Director of DOT's Department of Human Resources should assess skill gaps in key occupations that are involved in overseeing the safety of automated technologies.

**Action Needed:** DOT agreed with this recommendation. In May 2022, DOT noted that it had recently finished identifying which DOT positions involving oversight of automated technology safety require cybersecurity skills. DOT also noted plans to build a tool to assess competencies and skill gaps within these positions by February 2023. While cybersecurity skills are important for overseeing the safety of automated technologies, other skills—such as data analysis—are also important.

To fully implement this recommendation, DOT needs to complete its plan to assess skill gaps related to cybersecurity and to also assess skill gaps in relevant data analysis positions. Implementing this recommendation would help DOT better understand the expertise that exists within its workforce and address any gaps to ensure that its workforce can effectively oversee the safety of automated technologies.

### **High Risk Area:** [Improving Strategic Human Capital Management](#)

**Director:** Heather Krause

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### **3. Reducing Fraud and Abuse Risks.**

*Aviation: FAA Needs to Better Prevent, Detect, and Respond to Fraud and Abuse Risks in Aircraft Registration.* [GAO-20-164](#). Washington, D.C.: March 25, 2020.

**Recommendation:** The Administrator of FAA should verify aircraft registration applicants' and dealers' eligibility and information.

**Recommendation:** The Administrator of FAA should increase aircraft registration and dealer fees to ensure the fees are sufficient to cover the costs of FAA efforts to collect and verify applicant information while keeping pace with inflation.

**Action Needed:** FAA agreed with both recommendations. In March 2022, FAA officials said they completed a fraud risk assessment and held focus groups to provide recommendations for verifying aircraft registrants and dealers. To support verification of an individual's identity and a corporation's eligibility, the agency plans to build in such checks into Civil Aviation Registry Electronic Services requirements. However, the agency has yet to develop system capabilities to verify information and eligibility. To fully implement this recommendation, the agency needs to implement requirements that include verification of applicant and dealer information and eligibility. Without a process to verify applicants' information and eligibility, FAA is limited in its ability to prevent fraud and abuse of the registry.

In addition, as of March 2022, officials told us FAA plans to create a comprehensive rulemaking package to update aircraft registration and dealer fees, among other things, in 2024. To fully implement this recommendation, FAA needs to complete its rulemaking to ensure the new fees cover the costs of FAA's application verification efforts and can be adjusted further to keep pace with inflation. Without a change to these fees, FAA's registration costs continue to be borne by the public and limit resources available for applicant's and dealer's verification.

**Director:** Rebecca Shea

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#### **4. Improving Transparency and Communication.**

*DOT Discretionary Grants: Problems with Hurricane Sandy Transit Grant Selection Process Highlight the Need for Additional Accountability.* [GAO-17-20](#). Washington, D.C.: December 14, 2016.

**Recommendation:** Given DOT's new discretionary grant programs and similar challenges we have found with previous DOT programs, the Secretary of Transportation should issue a directive that governs department-wide and modal administration discretionary grant programs. Such a directive should include requirements to: (1) develop a plan for evaluating project proposals in advance of issuing a notice of funding availability that defines the stages of the process, including how the process will be overseen to ensure a consistent review of applications; (2) document key decisions, including the reason for any rating changes and the officials responsible for those changes, and how high-level concerns raised during the process were addressed; and (3) align stated program purpose and policy priorities with the evaluation and selection process.

**Action Needed:** DOT agreed with this recommendation. DOT issued a memo to some discretionary grant programs to update their policies and procedures in response to our recommendation. However, as of May 2022, this memo did not define how key decisions will be documented, as we recommended, and exempted some of the Department's largest discretionary grant programs. According to officials, DOT is in the process of finalizing new guidance for discretionary grants. To fully implement this recommendation, DOT needs to create a comprehensive, department-wide approach to ensure that its discretionary grant programs are consistently and transparently administered. Such a directive would help to ensure the integrity of future DOT discretionary grant award decisions and that awarded projects align with identified agency priorities.

#### **High Risk Area:** [Funding the Nation's Surface Transportation System](#)

**Director:** Elizabeth Repko

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*Air Ambulance: Data Collection and Transparency Needed to Enhance DOT Oversight.* [GAO-17-637](#). Washington, D.C.: July 27, 2017.

**Recommendation:** To increase transparency and obtain information to better inform decisions on whether to investigate potentially unfair or deceptive practices in the air ambulance industry, the Secretary of Transportation should assess available federal and industry data and



determine what further information could assist in the evaluation of future complaints or concerns regarding unfair or deceptive practices.

**Action Needed:** DOT disagreed with this recommendation. DOT noted that its decisions are driven by the unique facts of each case, rather than aggregate data. However, the FAA Reauthorization Act of 2018, signed into law on October 5, 2018, directed the establishment of an Air Ambulance and Patient Billing Advisory Committee and required the committee to make recommendations on a variety of topics, including the recommendations from our report.<sup>8</sup> On March 18, 2022, the committee's final report recommended that DOT collect additional industry information. DOT is required by the FAA Reauthorization Act of 2018 to consider the committee's recommendations and issue regulations or guidance as necessary. As of May 2022, DOT has not taken needed actions to close and implement our 2017 recommendation. DOT officials told us that they are evaluating the committee's recommendations and considering next steps.

To fully implement this recommendation, DOT needs to address our and the committee's recommendations to increase transparency and obtain information to better inform decisions on whether to investigate potentially unfair practices in the air ambulance industry. Without doing so, DOT is missing important information needed to put complaints into the context of the overall industry, which could affect its assessment on whether to pursue investigations.

**Director:** Heather Krause

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*Highway Emergency Relief: Federal Highway Administration Should Enhance Accountability over Project Decisions.* [GAO-20-32](#). Washington, D.C.: October 17, 2019.

**Recommendation:** The Administrator of FHWA should require FHWA division offices to document the rationale for classifying projects as emergency repairs, such as a description of why an emergency repair is necessary and which alternative strategies or repairs were considered, and to more clearly define the circumstances under which projects are classified as emergency repairs, including what constitutes restoration of essential traffic.

**Action Needed:** FHWA agreed with this recommendation. In April 2021, DOT distributed a memorandum directing division offices to document the rationale for classifying projects as emergency repairs, along with the elements we recommended be included, and planned to incorporate this requirement in FHWA's primary guidance document—the Emergency Relief Manual—by October 2021. This goal date was later moved to March 2022. However, as of June 2022, DOT officials updated the timeline for making these changes to the manual to December 2022.

To fully implement our recommendation, FHWA should complete the revisions to the Emergency Relief Manual. We will continue to monitor the department's efforts to implement our recommendation. This action would enhance transparency and ensure limited and essential emergency relief funds are being used for the purposes intended.

**Director:** Elizabeth Repko

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<sup>8</sup>Pub. L. No. 115-254, § 418, 132 Stat. 3186, 3334 (2018).

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*Pedestrian Safety: NHTSA Needs to Decide Whether to Include Pedestrian Safety Tests in Its New Car Assessment Program.* [GAO-20-419](#). Washington, D.C.: April 23, 2020.

**Recommendation:** The Administrator of National Highway Traffic Safety Administration (NHTSA) should document the overall process for making changes to the New Car Assessment Program (NCAP), including established criteria and milestones for decisions, and share this process with external stakeholders.

**Recommendation:** The Administrator of NHTSA should decide whether to include pedestrian safety tests in NCAP and NHTSA should communicate this decision and rationale to relevant stakeholders and the public.

**Action Needed:** NHTSA agreed with both recommendations. In March 2022, NHTSA requested public comments on proposed changes to NCAP including a proposal to add pedestrian automatic emergency braking testing to NCAP and a proposal to establish a 10-year roadmap for future updates to NCAP. According to NHTSA, the roadmap sets forth NHTSA's near-term and longer-term strategies for upgrading NCAP gradually with proposed upgrades in phases as technologies mature. NHTSA requested comments on its proposed NCAP changes by May 9, 2022, extended the comment period until June 8, 2022, and stated that it must finalize its NCAP roadmap by November 15, 2022 to meet statutory requirements, with subsequent updates at least every 4 years.

To fully implement these recommendations, the agency needs to complete its process of collecting and analyzing comments from the public and (1) issue a final roadmap for NCAP updates over the next 10 years with milestones for key actions, and (2) make a final decision on whether to include pedestrian safety tests in NCAP with the rationale for that decision. Not having a documented process for updating NCAP affects NHTSA's ability to ensure its safety tests are regularly updated. In addition, in the absence of a decision on including pedestrian safety tests in NCAP and the rationale, stakeholders lack clarity on whether NHTSA is using all of the policy tools at its disposal to address emerging safety risks and to achieve its strategic objectives.

**Director:** Andrew Von Ah

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## **5. Managing Cybersecurity Risks and Information Technology (IT).**

*Critical Infrastructure Protection: Additional Actions Are Essential for Assessing Cybersecurity Framework Adoption.* [GAO-18-211](#). Washington, D.C.: February 15, 2018.

**Recommendation:** The Secretary of Transportation, in cooperation with the Secretary of Homeland Security, should take steps to consult with respective sector partner(s), such as the sector coordinating council, DHS, and National Institute of Standards and Technology, as appropriate, to develop methods for determining the level and type of framework adoption by entities across their respective sector.

**Action Needed:** DOT agreed with this recommendation. As of March 2022, the department has taken steps to develop methods to determine the level and type of framework adoption in the respective sectors. Specifically, officials in the DOT's Office of Intelligence, Security, and

Emergency Response told us that, in coordination with DHS, they developed and distributed a survey to the transportation systems sector to determine the level and type of framework adoption. However, officials have yet to fully analyze the results of the survey and were unable to provide us with an expected date of completion.

To fully implement this recommendation, DOT should assess the results of the survey in order to determine framework adoption among entities within the sector. Until DOT obtains a more comprehensive understanding of the use of the cyber framework by entities across the transportation systems sector, the agency will be limited in its ability to understand the success of protection efforts or to determine where to focus limited resources for cyber risk mitigation.

**High Risk Area:** [Ensuring the Cybersecurity of the Nation](#)

**Director:** Dave Hinchman

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*Cybersecurity: Agencies Need to Fully Establish Risk Management Programs and Address Challenges.* [GAO-19-384](#). Washington, D.C.: July 25, 2019.

**Recommendation:** The Secretary of Transportation should fully develop a cybersecurity risk management strategy that includes the key elements identified in this report.

**Action Needed:** DOT agreed with this recommendation. In June 2022, DOT officials stated that the department planned to complete actions to implement this recommendation by November 2022. To fully implement this recommendation, the department needs to develop a cybersecurity risk management strategy that includes key elements, including a discussion of the department's risk tolerance and how it intends to assess, respond to, and monitor risks. Addressing our recommendation would help DOT address the growing number of cyber threats to systems and data by taking a risk-based approach to cybersecurity by effectively identifying, prioritizing, and managing DOT's cyber risks.

**High Risk Area:** [Ensuring the Cybersecurity of the Nation](#)

**Director:** Marisol Cruz Cain

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*IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps.* [GAO-17-8](#). Washington, D.C.: November 30, 2016.

**Recommendation:** To facilitate the analysis of gaps between current skills and future needs, the development of strategies for filling the gaps, and succession planning, the Secretary of Transportation should require the Chief Information Officer, Chief Human Capital Officer, and other senior managers as appropriate to address the shortfalls in IT workforce planning noted in this report, including the following actions: (1) establish a time frame for when the department is to finalize its draft workforce-planning process and maintain that process; (2) develop staffing requirements for all positions; (3) assess competency and staffing needs regularly for all positions; (4) assess gaps in staffing for all components of the workforce; (5) develop strategies and plans to address gaps in competencies and staffing; (6) implement activities that address gaps, including an IT acquisition cadre, cross-functional training of acquisition and program personnel, a career path for program managers, and use of special hiring authorities, if justified

and cost-effective; (7) monitor the department's progress in addressing competency and staffing gaps; and (8) report to department leadership on progress in addressing competency and staffing gaps.

**Action Needed:** DOT agreed with this recommendation. In January 2020, DOT officials told us it had established a workgroup to lead and conduct workforce-planning activities, and had defined the strategic goals and objectives for the department's IT workforce. As of March 2022, the agency has implemented two of the eight recommended IT workforce-planning activities—developing competency and staffing requirements, and assessing gaps in competencies and staffing. DOT officials stated that the department is continuing its efforts to implement the recommendation and plans to complete final actions by November 2023.

To fully address this recommendation, DOT should complete the remaining six IT workforce-planning activities. Until the department completes these activities, it risks not adequately assessing and addressing gaps in knowledge and skills that are critical to the success of major acquisitions.

**High Risk Area:** [Improving the Management of IT Acquisitions and Operations](#)

**Director:** Dave Hinchman

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**6. Improving Climate Resilience.**

*Climate Resilience: Options to Enhance the Resilience of Federally Funded Roads and Reduce Fiscal Exposure.* [GAO-21-436](#). Washington, D.C.: September 22, 2021.

**Recommendation:** The Secretary of Transportation should consider how FHWA plans to implement options to enhance the climate resilience of federally funded roads, such as the options identified in this report, when prioritizing actions on climate change in policy-making, as called for in Executive Order 14008.

**Action Needed:** DOT agreed with this recommendation. In February 2022, DOT officials told us that the agency plans to implement the relevant options that GAO recommended by November 30, 2023. To fully implement this recommendation, DOT should assess which options to exercise and determine how it plans to implement them. Addressing our recommendation would help DOT manage risks to federal investments in U.S. roads posed by climate change and ensure the safety and reliability of the U.S. transportation system.

**Director:** J. Alfredo Gómez

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## Congressional Relations

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## Public Affairs

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