



**Task Force on Fleet Management
Final Report
January 10, 2018**



Task Force on Fleet Management

Introduction

The Missouri Chief Operating Officer, Drew Erdmann, requested the assistance of private sector fleet managers and industry representatives to study vehicle fleet practices within Missouri State Government. The State of Missouri spends approximately \$98 million each year to transport state employees for official business. The COO asked for a task force to seek out opportunities to streamline fleet practices and lower the overall costs of transportation utilizing industry best practices.

On October 26, 2017, the Hawthorn Foundation convened the Task Force on Fleet Management. The Hawthorn Foundation is a unique nonpartisan nonprofit in Missouri. Its membership includes stakeholders from across Missouri drawn from business, labor, academia, government, and civic economic development. Hawthorn is the only institution in the state that convenes these diverse stakeholders to help strengthen Missouri's economy and improve the effectiveness of its state government.

The Task Force members reviewed state agency information and data, and provided input through a panel-like format. Meeting formats and data requests were based on Task Force requests, in order to facilitate gaining an understanding of fleet operations over the course of the limited interactions. Task Force members held conference calls with individual agencies, in addition to Task Force-only calls and meetings, and smaller group interactions between Task Force members. The task force completed its work in December 2017.

Task Force on Fleet Management

State and University Participating Organizations

Governor's Office

Drew Erdmann, Chief Operating Officer

Office of Administration

Sarah Steelman, Commissioner of Administration
Cindy Dixon, Director, Division of General Services
Stan Perkins, Acting State Fleet Manager



Missouri State Highway Patrol

Larry Rains, Director, Fleet & Facilities Division
Eric Romph, Assistant Director, Fleet & Facilities Division



Missouri Department of Transportation

Debbie Rickard, General Services Director
Amy Niederhelm, Fleet Manager



Missouri Department of Conservation

Jeff Arnold, Fleet Manager



University of Missouri

Ryan Rapp, Vice President for Finance
Tony Hall, Assistant Vice President & Chief Procurement Officer
John Haynes, MU – Operations, Senior Director
Teresa Vest, Director, Supplier Accountability and Outreach



M Health
University of Missouri

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Acknowledgements

The Hawthorn Foundation would like to thank the following individuals for their contributions to the Fleet Task Force.

Charlie Curtis, Government Sales Manager – Midwest, GPS Insight

Greg Dugan, Government Accounts Manager, Ford Motor Company

Dain Giesie, Assistant Vice President, Enterprise Fleet Management

Steve Hampton, Director of Fleet Services, Ameren UE

Kevin Hollander, Director of Fleet Operations, AT&T

Scott Lerch, Vice President, Enterprise Holdings

Mike MacComiskey, Government Sales Manager, GPS Insight

Rick McBee, Fleet Services Manager, Kansas City Power & Light

Sherry Montgomery, Area Manager, AT&T

Darryl Piasecki, Partner, McKinsey & Company

Greg Roberts, Director of Maintenance Administration, Hogan Truck Leasing

Steven Schmitz, Superintendent Equipment Acquisitions, Ameren UE

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Overview of Task Force Activities

The task force utilized a collaborative approach over seven weeks (October 26th – December 14th) that relied upon individuals and institutions volunteering to help accomplish this goal.

- Included both private sector expertise and State representatives
 - Private sector fleet managers and industry representatives from eight different companies.
 - Executive leadership and fleet manager representatives from multiple state agencies and the University of Missouri.
- The primary interaction was three in-person task force meetings attended by Task Force participants and which were a combination of presentations and discussion. The topics included:
 - Presentations from each of represented agency fleets to provide an overview of current practices, policies, guidelines, key metrics, and top issues facing each fleet. Task Force members asked questions and engaged in discussions around preliminary ideas.
 - Presentations from State Agencies outlining historical cost reduction initiatives (Exhibit 3), outcomes, and identified areas of opportunity.
 - Review of data and reports currently used to manage the fleet.
 - Presentations from task force members to share expertise and prioritize costs savings opportunities.
- Five agency specific WebEx meetings with Task Force Members and agency leadership to further discuss details of their transportation operations
- Approximately eight Task Force member only interactions (e.g., meetings, conference calls), both as a full task force and as smaller groups.

To assist the task force in learning the various fleets and their practices, a series of presentations and multiple pieces of data were presented at the first and second meetings. An initial data set was provided by each agency at the first task force meeting. In subsequent meetings, additional data was provided at the request from the Task Force. A snapshot of the information shared with the task force is shown in Exhibit 1:

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Exhibit 1: Sample data provided by fleet agencies

- Overview of Statewide fleet practices, history, state fleet and travel policies, statutory requirements and fleet related contracts available for agency use
- Presentation of a single fleet data file containing key metrics from each of the agency fleets. Data for each of the following areas was gathered from all five fleets to present to the task force in a single data file:
 - Vehicle counts
 - Total business miles driven
 - Estimated total fleet related expenditures
 - Estimated total transportation expenditures to include costs for fleet vehicles, rental vehicles and mileage reimbursement
 - Average cost per mile for various vehicle classes
 - Average miles per gallon for various vehicle classes
 - Fleet condition data to include average age and odometer at disposal
 - Average annual maintenance and repair expenditure per vehicle class
 - Average annual miles driven by various vehicle assignment use categories
 - Average residual value as a percentage of acquisition cost
- Individual agency fleet presentations that presented the following:
 - Purchasing practices
 - Asset management
 - Utilization and assignment standards
 - Technology utilized to track assets and costs
 - Fueling including bulk and commercial fueling practices and data
 - Maintenance and repair practices
 - Vehicle disposal
 - Safety policies
 - Fleet data including key metrics
- Top issues facing each fleet
- Agency best practices and previous successful initiatives
- National benchmarking survey data to compare to the OA fleet data
- Lifecycle cost analysis tools utilized by the State
- Identification of accessible fleet data from each agency
- Examples of key metrics and reports easily accessible by each fleet

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Fleet Overview

Five fleet agencies participated in the task force and each manage their own fleets through independent fleet programs and systems. These include:

- Office of Administration – OA performs some centralized fleet functions for most state agencies in the Executive Branch.
- Department of Transportation
- Department of Conservation
- Missouri State Highway Patrol
- University of Missouri

Exhibit 2: Fleet overview

Agency	Office of Administration	Transportation	Conservation	State Highway Patrol	University of Missouri	Total
Vehicle Type Count						
Light	2,774	1,513	982	1,329	1,185	7,783
Medium	730	474	96	131	115	1546
Heavy	147	1,565	82	11	18	1,823
Total Vehicle Count	3,651	3,552	1,160	1,471	1,318	11,152
FY 17 Business Miles	72,539,911	48,502,165	16,342,194	32,130,149	19,452,725	188,967,144
FY 17 Total Transportation Cost	\$23,075,480	\$37,001,451	\$8,096,255	\$20,694,505	\$9,068,234	\$97,935,925

Source: Office of Administration

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Exhibit 3: Prior Fleet Initiatives as Provided by State Agencies

Prior Missouri State Fleet Initiatives

Statewide Initiatives

Fleet Reductions

- 2003: 10% passenger vehicle reduction: 960 vehicles
- 2004: 25% reduction in vehicles driven less than 5,000 miles: 86 vehicles
- 2011: 917 vehicles

Reduced mileage reimbursement rate

- \$.37 in 2010 (over \$4M annual savings compared to previous rate methodology)

Targeted fleet expansions

- to direct travel from mileage reimbursement to lower cost state vehicles

Travel

- Travel Policy 2006 (increased % of travel in state vehicles from 77% in 2005 to 87% last year)
 - Trip Optimizer – direct travel to lowest cost travel option based on trips
 - Dual mileage reimbursement rate to avoid abuse of mileage reimbursement and control state travel expenses

2011 10% business miles reduction initiative – from 182M miles to 168M miles

Jefferson City Pool Consolidation (40% reduction in vehicles)

Highway Patrol

In-House Collision Repair

- One technician - performs most at-fault collision repairs
- \$280,000 savings in FY17
- Improved quality control
- 2005 Governor's Award for Efficiency

Equipment Wiring Harness

- In-house manufacturing
- Estimated savings of at least \$250,000

Highway Patrol/Water Patrol Fleet Merger

- January 2011
- Fleet grew overnight by 100 vehicles
- Significant maintenance needs
- No additional FTE

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Prior Missouri State Fleet Initiatives (continued)

MoDOT

- Automated fuel
- FASTER
- Standardization of preventative maintenance practices
- Multiple vendor awards
- Comprehensive Fleet & Equipment Team
- Currently engaged in a fleet review with an outside consultant. Report not yet complete.

Conservation

- **Vehicle Reduction**
 - Fiscal Year 2004
 - Fiscal Year 2010
- **Mileage Reduction**
 - Fiscal Year 2008
- **Vehicle Replacement Guidelines**
 - Fiscal Year 2010
- **Electronic Work Orders**
 - Input into the Fleet Management Information System
- **Vehicle Log Book LEAN Process Improvement**

University of Missouri

- 1) **Purchase new and used vehicles** through a combination of sources, OA or MoDOT contracts, direct bids with dealers, and GSA auctions. Used vehicles are suitable for service vehicles, as they typically only operate within a five mile radius of central campus.
 - a. MU utilizes used vehicles for its service fleet (about 50% of fleet). Light duty trucks, minivans, and one ton vans are supplied from high mileage pool vehicles and GSA auction vehicles. The GSA auction vehicles save 50% of capital cost and the total operating cost is 4-10% cheaper than new vehicles.
- 2) **Disposal of used vehicles** at live auctions through Surplus Property or on GovDeals.
- 3) **Car Share programs at MU and UMKC.** Expanding MU program to allow for business use. Exploring possibility of a RideShare program (through Enterprise) at MU.

Fleet lease program at MU Health – Our initial review of program expense indicates there are savings over our previous purchase and maintenance program. Factors include fleet right sizing and cost of maintenance reduction.

Source: State fleet agency presentations

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Guiding Principles for Task Force Recommendations

As this is the first of this type of task force, it is important to clarify how the Task Force approached the work, and the spirit of the recommendations. The following guiding principles should be considered when reviewing Task Force recommendations:

- Individual agencies are closest to their own fleet operations, and are best positioned to determine details of actions to take
 - The Fleet Task Force does not and cannot have in-depth detailed knowledge of individual agencies. There were a limited number of interactions, and it was not possible to do a detailed review of each agency fleet operations
 - While data was shared with the Task Force, it is not 100% complete, consistent, and clear. For example, not all agencies collect the same data. Where they do, the definitions in the data vary which make it difficult to benchmark across agencies
- Fleet Task Force can and should provide:
 - Recommendations to agencies (individually and collectively) based on what was learned and shared during the interactions
 - Expertise and information that can help enable agencies to perform feasibility assessments, and to succeed in implementation and capturing value from initiatives
- It is essential that the individual agencies conduct and own any analysis, feasibility assessments, and implementation coming from Task Force recommendations. This will ensure ownership within the agencies, and will lay the groundwork for ongoing analysis and collaboration across agencies.
- The follow through in implementation will be a significant driver of success. Accordingly, the Task Force has provided recommendations on implementation, in addition to the initiative recommendations.
- Due to limitations in time, and a desire to provide recommendations to Missouri agencies in a timely manner, the Task Force isolated scope of recommendations to cost reduction. In the course of feasibility analyses, state agencies should consider safety to ensure that any recommendations do not degrade safety or the ability to perform the job function.
- The Task Force is providing recommendations based on fleet expertise and best practices in private sector organizations. The Task Force members are not policy experts, and no recommendations provided should be interpreted as policy recommendations. Where recommendations differ from current policy, it is up to the state to do a feasibility assessment to understand the full impact and requirements of moving toward private sector best practices.

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Recommendations

The Task Force approached the discussion with a top-level view. First, the Task Force took the view of the overall objective -- *mobility*. Given that this is the overall purpose of state fleets, and there are alternatives to state owned vehicles (e.g., rental, reimbursement, pooling), the initial view was to look at the overall cost for transportation. Second, the Task Force viewed the fleet composition and asset life cycles, including: vehicle selection, funding, operational expenses, and disposition. These two views are very related, as optimizing the overall cost of transportation can and should drive fleet right sizing and typing.

Over the course of the discussions with the state agencies, and within the Task Force, several themes emerged:

- **Each agency is in a different place in terms of fleet management maturity and autonomy.** While some agencies seem to focus on transportation management and incorporate tools (e.g., trip optimizer), other agencies do not have a similar focus, or in some cases lack the authority to implement. This impacts:
 - How the agencies approach transportation strategy and optimization between transportation methods
 - Fleet strategy, in terms of fleet sizing and how managed
 - Practices in procurement, operations, maintenance, and disposal
- This **fragmented nature leads to inefficiencies and performance gaps** between agencies. Best practices and tools are not implemented across agencies. There is duplication in tools and approaches – agencies are often doing the same thing in parallel, and doing it differently for similar vehicles
- The **largest source of value to be captured is the more strategic elements** of fleet management. The Task Force used the term “strategic” for initiatives and recommendations related to the overall fleet strategy – e.g., role of state fleets in overall transportation strategy, size and makeup of the fleet, decisions related to procurement and disposal.
- The more operational initiatives (within operate and maintain):
 - Are areas where fleet managers frequently spend their day-to-day mindshare. Often times other agencies already have similar initiatives underway.
 - Will add value, however, it is often small relative to the strategic initiatives
- Accordingly, the **focus of task force recommendations will focus on fleet optimization** (including lifecycle cost analysis, fleet sizing, lease vs. buy and disposal), as well as a heavy emphasis on commonality and collaboration

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Priority recommendations include:

1) Fleet performance management

Each agency currently tracks a different, and incomplete list of transportation and fleet metrics. The Task Force believes that it is essential to track and manage to a complete set of consistent metrics across state agencies: “one version of the truth”. Characteristics of this set of metrics include:

- Standardized dashboard and similar metrics used across agencies
- Standard definitions of metrics (e.g., “light” vehicle, number of days in year considered for utilization, fully burdened maintenance expenses, depreciation)
- Anchored on a few top-level metrics, then cascading so that all metrics are linked and support problem-solving to address fleet issues

Fleet management systems include these types of fleet management metrics, and should be considered for use across agencies. Currently some agencies use them, while others do not. Using a consistent fleet management approach (or centralizing the management) will improve efficiency and effectiveness.

Ongoing effort should be made to seek opportunities to centralize redundant functions across the agencies. These opportunities should be implemented once it is determined that a centralized function adds value via cost reduction, consistency, or improved strategic alignment.

A cross-agency initiative should be undertaken to define and standardize metrics, and put in place the processes to collect and manage. This is a priority, as all other initiatives and decision making will be supported by better data.

2) Fleet Strategy

The Task Force’s fleet strategy recommendations are centered on the requirements and resources necessary to operate its fleet at the lowest possible cost, without sacrificing the operating needs of the agencies or the safety of its employees or constituents. By leveraging industry wide mobility management best practices of using a disciplined approach focused on:

- Cost and Replacement Analysis to determine lowest cost options (buy, lease, rent, reimburse)
- Annual Fleet Planning Cost Analysis to validate mobility strategy
- Administrative Structure to ensure consistency and compliance

By leveraging these practices, the State can provide an efficient solution to fit all of its mobility needs and significantly reduce costs.

The Task Force believes the State can best manage its fleet by first establishing benchmarks to help create the best fleet plan based on data driven recommendations. Then it is a matter of establishing the overall fleet goals, structure, operating protocols and performance reporting at a state level and deploying the plan within each agency.

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Once the complete list of standard metrics has been defined to form “one version of the truth”, it should be used to create:

Cost and Replacement Analysis

Fleet Profile and Cost Analysis:

- Current Fleet Composition -- This data should be used to profile the fleet by both vehicle types and roles, separated into mileage bands in order to provide some insight to current costs as well as fleet requirements and utilization patterns.
- Utilization Study -- A utilization study will help determine what other lower cost alternatives are available that serve to drive down total cost, while still serving the needs of the agency. This will require a very granular utilization assessment, looking at details such as number of days used (by vehicle), or number of pool vehicles used each day.

Replacement Analysis:

- Maximum savings can only be accomplished by applying the most efficient mobility solution to each application. Each business trip and vehicle should be evaluated against all possible mobility options. Allowing it to be categorized in one of the following:
 - Purchase
 - Lease
 - Rent
 - Reimburse
- These decisions should be based on math and consistent logic such as cost per mile and cost per day that can be supported by reliable forward looking market data. Whether purchasing, leasing, renting, sharing or reimbursing, the State should look to implement the solution that best meets the needs of the agency at the lowest cost to the taxpayers.

Fleet Planning:

Once the most efficient mobility strategy has been established, it is critical to cost reduction and ongoing cost containment to implement a fleet planning process encompassing vehicles included in the Purchase and Lease categories.

The current stated replacement criteria is approximately 120k miles for cars, trucks, SUVs and vans (varies by agency) with no age requirement. Based on data provided by the Office of Administration for 761 vehicles, 54% (404) of passenger vehicles, trucks, vans and SUVs are currently at or beyond their replacement target.

Driving down total vehicle expense starts with fleet acquisition, which includes how transactions are financed, but it also includes how well vehicles are sold. Fleet resale is often overlooked and does not get the same attention as the cost to acquire and finance. Consolidating experience and

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developed sales channels presents the State with one of the largest savings opportunities identified by the Task force. By establishing vehicle disposal benchmarks such as:

- Vehicle Market Value (pre-sale)
- Actual Sales Price (net of fees and other related expenses)
- Reconditioning Costs (driver behavior indicators)
- Days to Sell (inventory and capital efficiencies)
- Buyer Diversity (illuminates potential for buyer collusion and reduces high auction fees)

The State can ensure it is maximizing equity returns on each asset, providing capital back into the budget. Improvement in this process will not only help resell fleet vehicles at the highest price, but also create visibility to how vehicles lose value over time to determine the right time to sell. Basing replacement decisions solely on mileage intervals creates a risk of incurring higher depreciation cost than necessary, negatively impacting the budget. Often times, term is a larger driver of savings strategies and it is vital that the analysis be conducted annually to fully capitalize on market opportunities.

An accurate fleet profile and utilization analysis should provide the information to:

- Appropriately size the fleet
- Categorize the fleet
- Determine best in class options for vehicle selection (taking utility, safety, and cost into consideration)

Then by performing a total-cost-of-ownership analysis that takes all costs into consideration:

- Vehicle acquisition
- Funding costs including NPV of capital, cost of capital, inflation, etc.
- Operating costs
- Resale values

The State can determine the best holding period and funding strategy per vehicle.

3) Fleet Administration

In consideration of several macro-economic factors that can change regularly, the mobility strategy could change annually. Agencies would be responsible for monitoring all vehicles in their respective areas for savings opportunities to ensure leadership has the necessary information to make the best decision possible.

Improved efficiency and effectiveness would result from integrating the State's fleet management best practices across all agencies to capitalize on experience and economies of scale to reduce costs. When deployed properly, the State's personnel commitment to administering the fleet could be reduced without incurring significant capital investments in systems and studies currently being considered. A

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reasonable expectation for administering the light and medium duty fleet (84% of the total fleet) would require as little as 1 FTE per agency to handle any day to day tasks. The Task Force was not given the complete number of personnel dedicated to managing the fleet today, so to uncover the true cost of managing the fleet internally would require additional analysis to be completed.

4) Vehicle & Driver Safety

The Task Force was not involved in an in-depth review of safety related practices or initiatives. However, based on new and emerging vehicle technologies in some cases replacing older vehicles with newer models improves crashworthiness. Improvement in standard technology features has been significant in the past decade. As an example, replacing a 10-year-old vehicle with a 2016 standard model adds additional airbags, electronic stability control and many other essential safety features.

A more complete list of examples include:

- 2000 – 2010 Advanced Safety Features
 - ESC (Electronic Stability Control)
 - Blind Spot Detection
 - Forward Collision Warning
 - Lane Departure Warning

- 2010-2016 Advanced Driver Assistance Features
 - Rearview Video Systems
 - Automatic Emergency Braking
 - Pedestrian Automatic Emergency Braking
 - Rear Automatic Emergency Braking
 - Rear Cross Traffic Alert
 - Lane Centering Assist

Many of the features became federally mandated on passenger vehicles under 10,000lbs beginning in 2008. The State can check a vehicle's National Highway Transportation Safety Administration (NHTSA) safety rating by referencing www.safercar.gov.

The Task Force feels that this is an area that should receive a comprehensive review to ensure the State is aware of and addressing any potential risks to its employees and residents. Review should include but is not limited to areas focused on:

1. Safety standards to include vehicle selection
2. Creation & enforcement of a robust safety policy
3. Driver habits
4. Driver monitoring (i.e. new and ongoing background checks)
5. Driver training
6. Risk programs

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5) Tactical initiatives for each agency

The life cycle, the Task Force and state agency representatives identified a number of additional initiatives in each aspect of the life cycle. These represent opportunities for improvement in state agencies; the applicability of each varies by agency. These have been discussed with each agency. Additionally, each agency self-identified savings initiatives they felt were applicable and would have impact in their own agency, based on hearing best practices from other MO fleet agencies and Task Force members. A sample of these are listed below (Exhibit 4), and should remain on an evergreen list for agencies to tackle once priority initiatives have been accomplished.

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Exhibit 4: Sample of identified initiatives for consideration and “evergreen” list for agencies to review and incorporate through continuous improvement

Procure / Own

- Standardize life cycle cost (LCC) analysis benchmarks (across procure and dispose)
- Utilize LCC to determine alternative fuel vehicle decisions
- Expand use of vehicle pools to balance demand and improve utilization
- Optimize vehicle spec for LCC
- Benchmark cost of transportation vs other states
- Improve / consolidate fleet management practices
- Share best practices across agencies to reduce costs (e.g., upfit process)

Operate

- Assess potential cost impact of increased use of state bulk fuel
- Expand use of WEX data
- Assess potential for telematics in reducing operating costs
- Business miles reduction effort (e.g., teleconference)
- Evaluate compliance with travel policies
- Implement trip optimizer to drive use of overall lowest cost transportation means
- Harmonize POV reimbursement rates
- Create incentives to use lowest cost transportation means

Maintain

- Increase shared use of State maintenance facilities
- Integrate standard material purchasing programs for items that cross over e.g. tires, oil, filters resulting rebates for each.
- Implement a tire management program
- Implement rigorous warranty management program
- Standard maintenance software (potentially as part of state wide mobility software system)

Dispose

- Consolidate and expand resale channels
- Reduce the use of high fee auctions where lower cost high yield options are available
- Eliminate excess inventory and risk of loss by reducing days to sale
- Implement LCC analysis for replace vs. overhaul decisions

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Implementation

The Fleet Task Force recommends that the COO establish the following:

Fleet implementation PMO leader

Due to the importance of managing implementation, the Task Force recommends that the COO establish a Project Management Office (PMO) with a single person responsible for managing implementation of fleet initiatives. Responsibilities include, but are not limited to:

- Leadership and accountability for implementation
- Setting targets and milestones, and working with state agencies to ensure timely implementation
- Manage the cadence of interactions with agencies and leadership (e.g., COO)
- Tracking metrics and cost impact of initiatives

Champion for cross-cutting initiatives

Many of the ideas and initiatives are cross cutting and span multiple state agencies. Examples include standardized metrics, or unified fleet management system. The Task Force recommends that a champion / initiative owner be established to coordinate these initiatives across agencies to ensure timely and standardized implementation.

Performance management framework

The Task Force recommends that the PMO establish a project management framework for managing implementation and ensuring impact is realized. This framework should include, but not be limited to:

- Cadence of interactions, including purpose, participants, outputs, and preparation required
- Expectations for standardized communication and reporting from agencies on progress
- Independent finance tracking and validation of impact capture

A sample cadence of PMO interactions is shown in exhibit 5. These include:

- Regular fleet reviews with all agencies. These should be similar to the recent Task Force interactions, where agencies can learn from each other
- Monthly PMO review with initiative owners to review status of initiatives, and where help is needed
- Quarterly in-depth review of each agency to review overall progress, revisit and reprioritize initiatives, etc.

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Exhibit 5: Sample cadence of PMO interactions / fleet implementation

