

DRAFT CANDIDATE SCENARIOS

2025 TPM Peer Exchange - Using Performance Management to Respond to Uncertainty

Scenario #1: Emission Reduction with Rescission of Clean Energy

- The state DOT has heavily invested in electric vehicle (EV) charging infrastructure in alignment with federal clean energy initiatives (CEI), with a goal of achieving aggressive greenhouse gas (GHG) targets. Suddenly, there's a significant shift in federal policy: a rescission of CEI and a pushback against EV adoption. This throws the future of the National Electric Vehicle Infrastructure (NEVI) program into uncertainty. The DOT, having committed substantial resources and public messaging to EV expansion, now faces a challenge to ensure the sustainability of its existing EV charging infrastructure, continue to support the growing market share of EVs (which is still happening at a grassroots level despite federal changes), meet its GHG targets, and avoid appearing fiscally irresponsible.
- Reference: <https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/>
- Key Questions for Discussion:
 - What are the primary sources of uncertainty in this scenario, and how do they impact the agency's ability to maintain its organizational approaches and priorities amidst an evolving political climate?
 - Which of the following strategies will the agency use?
 - Margin of safety
 - Inversion/failure pre-mortem
 - Pathways to success
 - Strengthen “change muscles”
 - Embrace discomfort
 - Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
 - Other
 - What specific performance measures or data points should the agency prioritize monitoring to reduce uncertainty and adapt its approach going forward?

Scenario #2: Road Safety for Vulnerable Road Users

- The state DOT has historically struggled to incorporate asset management and safety criteria for vulnerable road users into its safety initiatives, and it faces a significant budget shortfall that is expected to worsen over the next 3-5 years. Recently, a 72-year-old woman crossing an intersection outside the crosswalk with a walker hit a pothole, fell, was struck by a truck, and tragically died at the scene. The accident took place at the border of two different jurisdictions, sparking controversy over who is responsible and culpable for this tragic event. The pavement at this intersection is rated as ‘Good’ condition, and the roadway is part of the National Highway System (NHS). Public outrage has been immediate and intense, directed at both local jurisdictions and the state DOT.
- Reference: <https://www.cbsnews.com/colorado/news/aurora-woman-hit-crosswalk-road-repairs-jewell-avenue-walker/>
- Key Questions for Discussion:
 - What are the primary sources of uncertainty in this scenario, and how do they impact the agency's ability to ensure safety for vulnerable road users?
 - Which of the following strategies will the agency use?

- Margin of safety
- Inversion/failure pre-mortem
- Pathways to success
- Strengthen “change muscles”
- Embrace discomfort
- Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
- Other
- What specific performance measures or data points should the agency prioritize monitoring to identify where else this could happen, reduce uncertainty, and mitigate future tragedies?

Scenario #3: System Performance & Driverless Cars

- The state DOT’s initiative to integrate driverless cars into the surface transportation network, initially championed for its potential to deliver significant cost savings, enhance safety records, and boost overall efficiency, has encountered unforeseen and substantial public resistance. Civil unrest has erupted, with citizens, fueled by a growing suspicion that they are being used for surveillance, actively targeting and vandalizing these autonomous vehicles. The future of this initiative, and the public's trust in new technologies, remains highly uncertain.
- Reference: <https://www.nbcnews.com/tech/innovation/waymo-cars-set-fire-sitting-ducks-la-protests-rcna212426>
- Key Questions for Discussion:
 - What are the primary sources of uncertainty in this scenario, and how do they impact the agency's ability to move forward with this initiative?
 - Which of the following strategies will the agency use?
 - Margin of safety
 - Inversion/failure pre-mortem
 - Pathways to success
 - Strengthen “change muscles”
 - Embrace discomfort
 - Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
 - Other
 - What specific performance measures or data points should the agency prioritize monitoring to reduce uncertainty, restore public trust, and find a path forward?

Scenario #4: Safety & Emerging Technologies

- Showing a truck driver's perspective to other drivers through external front-facing cameras and large screens on the back of the vehicle has the potential to improve road safety. Initial data from private trucking contractors shows that this technology can help eliminate blind spots caused by the truck's size, possibly lowering lane change accidents, sideswipes, and rear-end crashes, and creating a safer driving environment. However, the technology is not yet regulated and is largely untested. After one month of state DOT pilot tracking during rush hour in the largest urban center, there were no increases in fatalities or serious injuries; however, there was a 10% increase in travel time within the pilot area. Advocacy groups have recently stepped forward in opposition to this technology’s use, arguing that it poses safety risks, including driver distraction, misinterpretation or misuse, and privacy issues.
- Reference: <https://www.youtube.com/shorts/drjRe5QiEPO>
- Key Questions for Discussion:
 - What are the primary sources of uncertainty in this scenario, and how do they impact the agency's decision-making related to this technology?

- Which of the following strategies will the agency use?
 - Margin of safety
 - Inversion/failure pre-mortem
 - Pathways to success
 - Strengthen “change muscles”
 - Embrace discomfort
 - Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
 - Other
- What specific performance measures or data points should the agency prioritize monitoring to reduce uncertainty, address public concerns, and find a path forward?

Scenario #5: System Performance & Evolving Travel Patterns

- The state’s beloved professional sports franchise is moving its stadium from the current urban area to a suburban location. The new site was selected because of its low land cost, but it lacks strong transportation options, especially multi-modal infrastructure. The state DOT is facing multiple challenges related to the move. There is no existing public transit, walkability is limited, and the current road system consists of low-volume roads that cannot handle the expected increase in traffic. Most private businesses in the immediate area of the new stadium support the relocation, citing potential new revenue from more visitors. The public is divided; some raise concerns about equity, while others see it as an opportunity for a modern, state-of-the-art facility.
- Reference: <https://www.youtube.com/watch?v=bLcU7LA5I9c>
- Key Questions for Discussion:
 - What are the primary sources of uncertainty in this scenario, and how do they impact the agency's ability to address the transportation challenges related to the stadium relocation?
 - Which of the following strategies will the agency use?
 - Margin of safety
 - Inversion/failure pre-mortem
 - Pathways to success
 - Strengthen “change muscles”
 - Embrace discomfort
 - Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
 - Other
 - What specific performance measures or data points should the agency prioritize monitoring to reduce uncertainty and address this situation?

Scenario #6: Emission Reduction & Evolving Travel Patterns

- Amazon is expanding its operations and adding a new distribution center in an EPA-designated Maintenance Area, which is expected to raise daily truck traffic by 500%. This increase, combined with the state's reliance on coal-fired power plants in rural regions, raises environmental concerns. At the same time, the local jurisdiction and politicians are putting pressure on the DOT to upgrade 20 miles of roads and build a new bridge to support the center, and the Transportation Board is publicly criticizing the state DOT for its failure to support economic growth targets. The state DOT must balance these opposing demands and external pressures to make informed decisions about infrastructure development and environmental impact.
- Reference: <https://www.theguardian.com/us-news/2023/may/16/amazon-warehouse-traffic-noise-brooklyn-red-hook>
- Key Questions for Discussion:

- What are the primary sources of uncertainty in this scenario, and how do they impact the agency's ability to address the transportation challenges related to the new Amazon Distribution Center?
- Which of the following strategies will the agency use?
 - Margin of safety
 - Inversion/failure pre-mortem
 - Pathways to success
 - Strengthen “change muscles”
 - Embrace discomfort
 - Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
 - Other
- What specific performance measures or data points should the agency prioritize monitoring to reduce uncertainty and address this situation?

Scenario #7: Growing Emergency Damage with Competing Priorities

- Your agency is experiencing growing emergency damage to the transportation system from extreme weather. To increase investments in adaptation projects and build better system resiliency, investments in asset condition improvement projects must be reduced to free up funds. If the resiliency funding is increased, the physical asset conditions for pavements and bridges are expected to reduce slowly over time at the same time the system resiliency is expected to improve over time. There is uncertainty in the actual amount of condition reduction and the expected reduction in future emergency damage repair costs.
- Reference: <https://www.its.ucla.edu/publication/wildfire-recovery-and-resilience-strategies-for-resource-constrained-and-vulnerable-communities/>
- Key Questions for Discussion:
 - What are the primary sources of uncertainty in this scenario, and how do they impact the agency's ability to address the transportation challenges related to the new Amazon Distribution Center?
 - Which of the following strategies will the agency use?
 - Margin of safety
 - Inversion/failure pre-mortem
 - Pathways to success
 - Strengthen “change muscles”
 - Embrace discomfort
 - Focus on short- mid-term goals, then prioritize the crisis and ignore the noise
 - Other
 - What specific performance measures or data points should the agency prioritize monitoring to reduce uncertainty and find a path forward?