TECHNICAL MEMORANDUM

Project Prioritization Practices and Methods

Task 4 – Synthesis Development

SUMA
Support for Urban Mobility Analysis

A technical memorandum to

Support for Urban Mobility Analysis (SUMA)
FHWA Pooled Fund Study

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Executive Summary

Since the authorization of the Federal transportation act "Moving Ahead for Progress in the 21st Century" (MAP-21), state departments of transportation (DOTs), metropolitan planning organizations (MPOs) and local agencies have increased their focus on incorporating performance-based approaches into the transportation project prioritization process. There is also increased incentive to adopt a holistic process that integrates local input, community desires, and funding and policy constraints with traditional strategies identifying system needs and mobility improvements. Because of the relatively new federal guidance, decision-making bodies at the regional and local levels can benefit from peer exchange of knowledge, technology and skills to address operational bottlenecks that can arise due to lack of standard practices and an established process framework.

This technical memorandum presents information for transportation practitioners interested in current practices, approaches, and tools for project prioritization that may improve system performance, address community desires, and include policy elements for system needs and mobility strategies.

The research team investigated the state-of-the-practice of project prioritization processes through a literature search. The review approach provided a categorical structure that the researchers used to summarize key characteristics, approaches, and tools that agencies have adopted to develop comprehensive, multi-dimensional project prioritization frameworks. There is no "one size fits all" strategy encompassing practices, procedures and efforts for the transportation project prioritization process. Each state DOT makes these decisions within a larger framework that is particular to the funding mechanisms, state Constitutions, policy variations and administrative regulations.

Key Points

- Practices, procedures and efforts pertaining to transportation project prioritization vary among agencies which have detailed process flows/frameworks in place. For some agencies, the procedure is more unstructured, and might benefit from a more rigorous, data-driven evaluation, local input and periodic update. Agencies with a structured process might benefit by considering other factors.
- Project prioritization methods from several agencies (state DOTs, MPOs, counties, municipalities, Council of Governments, etc., in urban and rural areas) were reviewed because decision-making bodies at the state or regional levels typically design and implement such processes.
- By far the most referenced federal requirement was the Moving Ahead for Progress in the 21st Century legislation. The most common goal across methodologies was safety, followed by maximizing benefit-cost ratio. A few other techniques, specifically multi-objective optimization and logic scoring preference methodologies - currently mostly used in non-agency research work or consulting service - focus on creating the maximum cohesion between the desires of multiple stakeholders.
- Almost every prioritization method utilizes a mix of qualitative and quantitative practices. Common practices involve a project being evaluated and assigned a score across different sets of performance measures which typically fall into different goal categories (e.g., mobility, safety, sustainability, etc.). Then the group of projects that best address the goals of a certain project type is selected as the final set of projects.
- The most common constraint pertains to data needs. Another common constraint was expertise. Cost of implementing a regional or agency-wide project prioritization process was not indicated as a constraint by agencies, mainly because a streamlined project prioritization framework itself is expected to lead to sustained cost benefit efficiency. The timespan of prioritization varied greatly, and often depended on how central the cohesion with existing plans was to the prioritization processes.

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Introduction

Since the authorization of the Federal transportation act "Moving Ahead for Progress in the 21st Century" (MAP-21), state departments of transportation (DOTs), metropolitan planning organizations (MPOs) and local agencies have increased their focus on incorporating performance-based approaches into the transportation project prioritization process. There is also increased incentive to adopt a holistic process that allows agencies to continue their efforts to integrate local community input, data and analysis methodology improvements, and funding and policy constraints into their project prioritization process and methods in identifying system needs and mobility improvements. State, regional and local agencies operate in a variety of situations, rules and Constitutions. Because of the relatively new federal guidance, decision-making bodies at these levels can benefit from peer exchange of knowledge, technology and skills to address operational bottlenecks that can arise due to lack of standard practices and an established process framework.

Research Objective and Approach

The objective of this technical memorandum is to synthesize best practices, approaches, and tools for project prioritization that connects system performance, community desires, and policy constraints with strategies to address system needs and mobility solutions.

The research team conducted the following primary activities:

1. Conducted a literature search to identify the state of the practice.
2. Identified approaches and tools for project prioritization based on current practices.
3. Identified constraints, challenges and opportunities for implementation of several effective project prioritization practices and methods.

Synthesis Organization

The technical memorandum is organized in the following sections:

1. Introduction: research objective and approach, and synthesis organization.
2. Project Prioritization State of the Practice: information on the review approach and current practices, including identified approaches and tools for project prioritization as well as constraints and challenges for implementation of project prioritization.
3. Conclusions: summary of findings and key takeaways.
4. References: a listing of resources documented in the research.

Project Prioritization State of the Practice

This section summarizes the findings of a literature review conducted to identify the state-of-the-practice in project prioritization approaches, methods and tools implemented by several transportation agencies.

Approach

The study involved a review of 25 resources pertaining to project prioritization practices. Researchers prioritized these sources from an initial identification of over 50 domestic and international resources. A complete list of resources is included in the Reference section.

This synthesis of transportation project prioritization practices summarizes key information regarding project prioritization practices. The following 14 key characteristics of project prioritization processes are covered:

- **Benefiting Agencies** – sectors (public and/or private) that would likely benefit from the specific project prioritization practices.
- **Department Primary Function** – which entities (public and/or private) would likely initiate, and/or perform the development and/or implementation of the specific project prioritization practices.
- **Policy Requirements and Initiatives** – the critical elements that would regulate and initiate the implementation of specific project prioritization practices.
- **Mode Focus** – the modes of transportation on which the specific project prioritization practices focused.
- **Goal Focus** – the performance goals established by the Moving Ahead for Progress in the 21st Century Act (MAP-21):
    - ***Safety*** (Achieve a significant reduction in traffic fatalities and serious injuries on all public roads)
    - ***Infrastructure condition*** (Maintain the highway infrastructure asset system in a state of good repair)
    - ***Congestion reduction*** (Achieve a significant reduction in congestion on the National Highway System)
    - ***System reliability*** (Improve the efficiency of the surface transportation system)
    - ***Freight movement and economic vitality*** (Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development)
    - ***Environmental sustainability*** (Enhance the performance of the transportation system while protecting and enhancing the natural environment)
    - ***Reduced project delivery delays*** (Reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices)
- **Methodology Synopsis** – a summary of the methodology outlining the various steps and procedures behind the project prioritization process.
- **Tool Development** – any planning or performance measurement tools used for the project prioritization process.
- **Data Sources** – any sources of data used for the project prioritization process or the tool development.
- **Spatial Scope** – the geographical level at which the project prioritization practices were or would be implemented.
- **Temporal Scope** – the timeframe during which the project prioritization practices were or would be implemented.

- **Input Data** – any types of data input incorporated into the project prioritization process or the tool development.
- **Output Data** – any types of data output generated from the project prioritization process or the tool development.
- **Performance Measures** – what parameters were used to evaluate the effectiveness of the project prioritization practices.
- **Implementation Constraints** – the critical elements that would hinder the implementation of specific project prioritization practices.

The research team categorized each piece of relevant literature to keep the synthesis simplistic and user-friendly for transportation practitioners, the primary audience of the study.

Findings

This section summarizes the key findings of the study, identifying key characteristics, approaches, and tools (where applicable) that agencies have adopted to develop a comprehensive, multi-dimensional project prioritization process. Practices, procedures and efforts pertaining to transportation project prioritization vary among agencies which have detailed process flows/frameworks in place. For some agencies, the procedure is more unstructured, and might benefit from a more rigorous, data-driven evaluation, local input and periodic update. This review of the state-of-practices among a variety of agencies provides a "virtual peer exchange" of knowledge, skills and technology that can be used as project prioritization processes are improved.

Benefitting Agencies

Decision-making bodies at the state (DOT), regional (MPO) or more local levels implement project prioritization processes. Project prioritization methods of several of these agencies were included in the review. Unique cases include literature studying projects around the Washington, D.C. area, which detailed Baltimore Transit's process. These regional and state entities would likely put forward that the local jurisdictions which submit projects for funding consideration would also benefit from a clear and systematic prioritization process.

Requirements and Goals

By far the most referenced federal requirement was the "Moving Ahead for Progress in the 21st Century" (MAP-21) legislation. In requiring performance-based evaluation under federal guidance, MAP-21 was cited multiple times as creating a need for a systemized method of project prioritization. Most states do not have requirements for project proposals which preempt or exceed those of MAP-21. There are, however, a few examples in which a state has a system which creates additional requirements and evaluations along specific performance measures. One such example is Washington State's surface transportation investment process, which requires regions to evaluate and prioritize projects based on nine weighted categories. These categories are re-evaluated annually. Another example is North Carolina's process for prioritizing rail improvement using surface transportation funds, which requires mode specific analysis including train delay time. Maryland's State Highway Administration requires a threshold of federal/state funding assistance in order to consider a project proposal, which means even smaller localities in the area must have processes which fully follow the directives of federal/state law, highlighting a growing trend toward adopting a project prioritization framework at all levels. One of the more unique project priority methodologies can be found in the Washington, D.C. region, specifically the state highway fund allocation from Maryland's State Highway Administration. Their process requires regions to petition for project funds through what is called a "priority letter" which outlines existing area conditions as well as a project's cost/benefit and improvement potential.

For project prioritization, a few of the more common goals across methodologies are as follows:

- Safety
- Benefit/cost
- System upkeep
- Congestion reduction
- Economic development

Some less common goals include:

- Accessibility (used more commonly in developing countries like India; Lincoln Area MPO in Nebraska; Chicago region freight prioritization; part of a goal measure for Missouri DOT)
- Livability/Supporting Active Lifestyles (Illinois DOT; Nebraska's Lincoln Area MPO)
- Environmental Impact (Lincoln MPO; India)

While accessibility was not usually an independent goal, it was often included as a performance measure under the umbrella of economic development.

A few techniques, specifically multi-objective optimization and logic scoring preference methodologies - currently mostly used in non-agency research work or consulting service - focus on creating the maximum cohesion between the desires of multiple stakeholders. For these methods, rather than evaluating projects directly along common goals, the desired outcomes of each stakeholder are either assumed or qualitatively compiled and modeled such that the most all-serving portfolio of projects can be considered. The objective in these methods is to create a project portfolio which most optimally satisfies the independent goals of each stakeholder.

Process and Methods

Almost every prioritization method utilizes a mix of qualitative and quantitative practices. Common practices involve evaluating a project and assigning a score across different sets of performance measures which typically fall into different goal categories (e.g., mobility, safety, sustainability, etc.). Then the group of projects that best address the goals of a certain project type is selected as the final set of projects. Sometimes performance measures are aggregated into a goal-based score, while other times the performance measures simply inform a benefit-cost analysis and the benefit-to-cost (b/c) ratio is treated as the final score. It is uncommon that projects are budgeted and prioritized based on where they rank per the initial phase of prioritization process alone. Usually the scoring process serves as a way to reduce the number of candidate projects, and then a designated set of stakeholders qualitatively evaluates each project to select their individual rankings.

For large roadway infrastructure projects, an extra preliminary step involves roadway inventory data to identify segments or areas which are most in need of projects. Roadway inventory data used to identify a subset of qualifying project areas include volume, capacity, crash, and pavement condition data. This additional preliminary step is typically added for highway improvement projects. Rather than evaluating all projects in a vacuum, only projects which affect these areas are evaluated for funding.

An important question is "who" is doing these analyses. This can be approached in multiple ways.

Who is doing quantitative work?

- Quantitative work can be performed by a number of stakeholders. Sometimes, the submitting developer or smaller local entity is required to do the performance metric analysis prior to submitting the project. This type of process is usually one where benefit/cost ratio is the ultimate rank score. Smaller jurisdictions may be provided help in this process by the regional or state entity to which they are submitting a project.
- On the other hand, sometimes it is the technical committee of the regional or state entity that is doing all the analysis. Projects are submitted with various details, and the score is calculated in-house at the Council of Government (COG), DOT, or MPO level.

Who is doing qualitative work?

- There are two common processes for project prioritization methods which end with a final qualitative review of the projects. In one case, the MPO, COG, or DOT will have a small in-house advisory committee, which ultimately makes decisions regarding budgeting for the final qualifying projects.
- The other process utilizes a wider net, contacting and surveying a number of outside stakeholders regarding which projects they think should be prioritized. This is more uncommon but not unheard of for regional governments. While it is true that advisory committees often have representation from multiple agencies and stakeholders, this process goes far beyond that in terms of the breadth of involvement from different transportation industry participants.

Tool Development

Select use cases for software-based tools

The evaluation tool *"Hi-ImPct"* was developed by the Florida Department of Transportation to advance their highway improvement project prioritization practices. Designed in Microsoft excel format, Hi-ImPct uses crash data and roadway inventory data to quantitatively measure the safety impacts of various countermeasures along the state highway network. Users select one of twelve "Emphasis Areas", e.g., Impaired Driving, Older Drivers, etc. Each of these emphasis areas is associated with a set of relevant functional classifications or facility types, as well as a list of countermeasures. Values for costs and benefits for these countermeasures are collected from data or research from agencies including California Department of Transportation (Caltrans), Illinois Department of Transportation (IDOT), Minnesota Department of Transportation (MNDOT), and Florida Department of Transportation (FDOT). Once users input details about the temporal and spatial scope of a given project, the tool provides benefit/cost ratio, net present value (NPV), and reduction in frequency and crash severity for the selected countermeasure(s) (users can select up to two). The goal of this tool is to give decision makers an efficient way to judge the effectiveness of various countermeasures before deployment.

Texas Department of Transportation (TxDOT) introduced *"Decision Lens"*, a cloud-based prioritization and resource allocation software solution, to their project prioritization practices. It was designed to help stakeholders make critical decisions. Using identified goals and objectives, performance criteria were assigned to quantify the impacts for establishing priorities. Data from multiple sources were integrated into the *Performance Metrics: Data Integration System (PM-DIS)*. Default criteria-based weights were set by TxDOT. Users are able to adjust the weights based on local conditions. Two types of criteria were incorporated into the PM-DIS: objective (data-driven), and subjective (judgment-based). As analytical capabilities evolve in the future, additional criteria will be added to perform in-depth project prioritization analysis. Multiple Objective Decision Analysis (MODA) Scoring was then used for project selection and resource allocation.

Select use cases for modeling-based tools

Originally developed by the World Bank, the Highway Development and Management (HDM-4) model and Roads Economic Decision (RED) model are representatives of modeling-based tools for infrastructure-based project prioritization. HDM-4 is primarily used in developing countries and currently managed by the World Road Association (PIARC), although it has the capabilities to be applicable to all types of road classifications in all types of settings. The core of HDM-4 incorporates the concept of benefit-cost analysis (BCA) which compares benefits relative to costs within the environmental context. In addition to the BCA, HDM-4 has extended modules for evaluating producer surplus and performing multicriteria analysis. RED was initially designed for the Sub-Saharan Africa Transport Policy Program (SSATP). Similar to HDM-4, RED focuses on applications for low volume roads and unpaved roads, and has capabilities of performing multicriteria analysis. However, RED provides more detailed information and accounts for uncertainty in the economic assessment. Other enhancements to both tools include the weighted cost-effectiveness analysis and consumer surplus analysis.

Select use cases for multicriteria-based Tools

As discussed in a previous section, multiple-criteria decision-making (MCDM) or multiple-criteria decision analysis (MCDA) can be one of the functionalities built in the existing software-based tools or modeling-based tools. It can also be the core functionality, as part of a stand-alone multicriteria-based tool. MCDM or MCDA includes a variety of techniques. Several of these are included in Exhibit 1. These techniques and applications are commonly used for research purposes. However, with the core concept in mind, multicriteria-based tools have the potential to be expanded and applied to industry and agency practice.

The full list of tools reviewed in this synthesis is provided in Exhibit 1. Note that in Exhibit 1, Hi-ImPct, PLANSAFE, and SafetyAnalyst are commonly used for project prioritization with a safety goal focus. Highway Development and Management Model (HDM-4), and Roads Economic Decision Model (RED) are commonly used for project prioritization with an infrastructure condition goal focus. Stochastic Multi-period Investment Selection Model (S-MISM), Forecasting Land Use, Transport and Economy (FLUTE), Decision Lens, and multicriteria-based tools are mainly used for project prioritization covering multiple aspects of transportation system improvement.

Tool Type #1 Software-based tools

- Hi-ImPct
- PLANSAFE
- SafetyAnalyst
- FLUTE (Forecasting Land Use, Transport and Economy)
- Decision Lens

Tool Type #2 Modeling-based tools

- HDM-4 (Highway Development and Management Model)
- RED (Roads Economic Decision Model)
- S-MISM (Stochastic Multi-period Investment Selection Model)

Tool Type #3 Multicriteria-based tools

- ELECTRE (Elimination Et Choix Traduisant la Realité)
- PROMETHEE (Preference Ranking Organization Method for Enrichment Evaluations)
- MAUT (Multi-Attribute Utility Theory)
- AHP (Analytic Hierarchy Process)
- NCIC (Non-Traditional Capital Investment Criteria)
- MACBETH (Measuring Attractiveness by a Categorical Based Evaluation Technique)
- TOPSIS (Technique for Order Preference by Similarity to Ideal Solution)
- DEA (Data Envelopment Analysis)
- TODIM (Multicriteria Interactive Decision Making)

Exhibit 1: Classification of Project Prioritization Tools

Performance Measures

Several different performance measures are utilized by agencies during the project prioritization process. Some of these measures are recommended by FHWA, while a few others are inspired by local needs and goals. The full list of performance measures is provided in Exhibit 2, arranged in four different levels of commonality.

Exhibit 2: Performance Measures for Different Levels of Commonality

Several of the measures shown in Exhibit 2 can also be classified based on broad project types, as listed in Exhibit 3.

Exhibit 3: Common Performance Measures for Different Project Prioritization Types

Type of Project Prioritization	Common Performance Measures
Freight	• Total Freight Hours Delay • Planning Time Index • Travel Time Index • Exposure Factor for heavy vehicles • Gross Regional Product • Number of Major Freight Generators
Highway	• Current Asset Condition • Pavement Condition
Regional Transportation Demand Management (TDM)	• Median Household Income • Land Use • Average Trip Length • Area Type

Constraints and Challenges

Data is the most common analysis constraint. Some of the tools, such as the one used by Florida DOT ("Hi-ImPct"), require inputs such as roadway inventory data or transportation demand models, which may not be readily available in case of some agencies. The accessibility, usability, and existence of data pertaining to traffic/congestion, freight, safety, and economy is required for several prioritization processes. Another common constraint in the safety area was that any countermeasure which is not included in the Federal Highway Administration (FHWA) Crash Modification Factors (CMF) clearinghouse could not be properly evaluated. CMFs play a key role in the performance-based assessment of safety-focused projects.

One final constraint was expertise. Some agencies, such as Ohio DOT and the Metropolitan Washington (DC) COG, offer help to localities where expertise in the required evaluation did not exist. Some expertise in specific areas of mathematics/operations research is also needed to successfully apply the two research techniques included in this study (Logic Scoring Preference and Multi-Objective Optimization).

Costs and Horizon

Cost of implementing a regional or agency-wide project prioritization process was not indicated as a constraint by agencies, mainly because a streamlined project prioritization framework itself is expected to lead to sustained cost benefit efficiency. For agencies such as Florida DOT which had specific tools developed for their process, there clearly is a cost involved in developing such tools. These agencies would have to be contacted directly to learn more.

The timespan of prioritization varied greatly, and often depended on how central the cohesion with existing plans was to the prioritization processes. For projects prioritized within a region or states' Long Range Transportation Plan (LRTP), timespans could be from 10 to 20 years. For projects prioritized for a Transportation Improvement Program (TIP) document, project lists would be re-evaluated every 2 to 3

years. Prince George's County, Maryland, has a six-year process for their Capital Improvement Program, several years longer than the typical process.

Agency Perspectives

FHWA has identified three main types of transportation projects: *preservation, expansion,* and *enhancement*. Preservation projects are incentivized to consider a data-driven framework to address congestion, safety, and land use aspects of an improvement, and expansion projects to consider how to better connect and utilize existing assets. Enhancement projects can be strategically aligned with maintenance projects when an agency is able to capture all improvement needs for an area. The framework is developed transparently with input from the public and local agencies during the investment prioritization process, through adjusting the weighting of each goal or criteria in the scoring process to reflect priorities relevant to a subject project. This provides transparency by clarifying the process so the public, all stakeholders, the DOTs and local agencies themselves understand how decisions are made.

First, an agency establishes its goals, objectives, performance measures, and targets during the Goals and Policy stage. The agency must outline its goals and what it aims to achieve in order to know specifically what to measure. It is important to work toward setting specific numeric targets rather than simple "up or down" trend targets, but some experience is needed to identify more detailed values. Objectives should consider all types of travel affected (passenger and freight), modes, and geographies.

In the second stage, the agency incorporates local input to identify area-specific investment priorities. Maryland DOT recommends that "the burden lay with each agency submitting candidate projects to state which target(s) the project supports". It encourages the localities and agencies to consider the LRTP as a guide in their own project selection process and enables a monitoring process. The DOT can then track the project's impact on the goals and targets which the project claims to support.

Illinois DOT utilizes a Performance-Based Planning and Programming (PBPP) framework. The framework was developed after extensive review of practices across several state DOTs, regional governments, and foreign and research sources. The framework incorporates a three-stage PBPP process in a scientific and holistic manner, leading to adoption of a "performance- and economic-based system of project development and prioritization":

- *Goal-setting and policy process*
- *Investment prioritization process*
- *Project selection process*

Based on the various components involved in the goals, policies, and investment priorities, IDOT creates a scoring mechanism to evaluate and rank individual projects.

The *Investment Priorities stage*, sometimes called a "needs assessment," applies the state goals and targets to an area's unique needs, using criteria weights in the project prioritization scoring process and broad investment recommendation. For example, Virginia DOT's needs assessment system (under the VTrans 2035 plan) required the worst performing goals of the prior four years to receive the highest priorities. For example, if the measures for goals like congestion reduction, safety or travel reliability were the least met (measured values farthest from targets set) among all goals for the last four years, these unmet goals receive the highest weighting for the current year's project prioritization process. Weighting factors should be adjusted to reflect local area needs and priorities. For example, in an industrial area, weighting may reflect local priorities to favor freight projects, however, in a suburban residential area, weighting may favor commuter projects.

The *Project Selection stage* creates the Statewide Transportation Improvement Program (STIP) which is the federally required list (or program) of projects to be accomplished in the near-term, project timelines, and project funding. The evaluation step compares proposed projects against the top investment priorities identified in the Investment Priorities Stage. The result of the evaluation may be a score for each criterion. For criteria that are hard to quantify, a specific score may not be appropriate. A general characterization can also perform the task (e.g., significant, moderate, or minimal impact) for a project addressing a goal. The agency should then apply the criteria weights for relevant areas established in the Investment Priorities Stage. A decision-making body then uses the project descriptions and rankings to better inform their project funding decisions in a variety of ways, such as statewide, by district, or by mode.

Some state DOT frameworks, such as the Virginia Department of Transportation, choose not to directly consider project costs until the project selection at the end of the framework. This allows the needs to be fully analyzed free of interference from cost considerations, which may otherwise prevent vital needs from ever being considered. For example, a safety improvement may add significant cost to a project, and spending money in rural communities may be less effective than spending money in urban areas, but DOTs have an obligation to value safety and geographic equity in addition to cost-effectiveness. While cost-effective decision-making is an important benefit of PBPP frameworks, it is not included in IDOT's framework as a primary quality.

Frameworks like the one used by Florida DOT guarantee geographic equity by ensuring every district gets back in project and program funding at least what it contributes in taxes and fees as required by Florida law. An efficient performance-based prioritization process allows for significant flexibility to account for equity and other factors that are hard to quantify. Similarly, for geographic equity, DOTs can use weighting to help balance the needs of rural transportation planning organizations and transit operators against metropolitan needs. For example, if an urban project has a higher positive impact than a rural project in an underserved area, the DOT could use a heavily weighted equity factor to prioritize the rural project. The North Carolina DOT distributes “regional” funds according to population and “division” funds are distributed evenly among all NCDOT highway divisions (districts).

Conclusions

Many states have recognized the importance of a performance-based, data-driven, scientific and holistic project prioritization framework. A systematic process of project prioritization has been pursued by these agencies for a variety of reasons:

i. Maximize spending efficiency with limited budgets,
ii. Allow evaluation of spending choices in line with long-term plans and goals,
iii. Offer better information to involve stakeholders, and
iv. Provide transparency for the public and the decision-making hierarchy.

There is no “one size fits all” strategy encompassing practices, procedures and efforts for the transportation project prioritization process. Each state DOT makes these decisions within a larger framework that is particular to the funding mechanisms, state Constitutions, policy variations and administrative regulations. This synthesis compiled findings from a literature review that identified the different practices and tools adopted by several state DOTs, MPOs and local agencies in the United States, and a few other research efforts. Important aspects of the project prioritization process were described to identify notable elements for transportation practitioners. State DOTs, MPOs and local agencies can consider these as they continue their efforts to integrate local community input, data and analysis methodology improvements, and funding and policy constraints into their project prioritization process and methods.

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