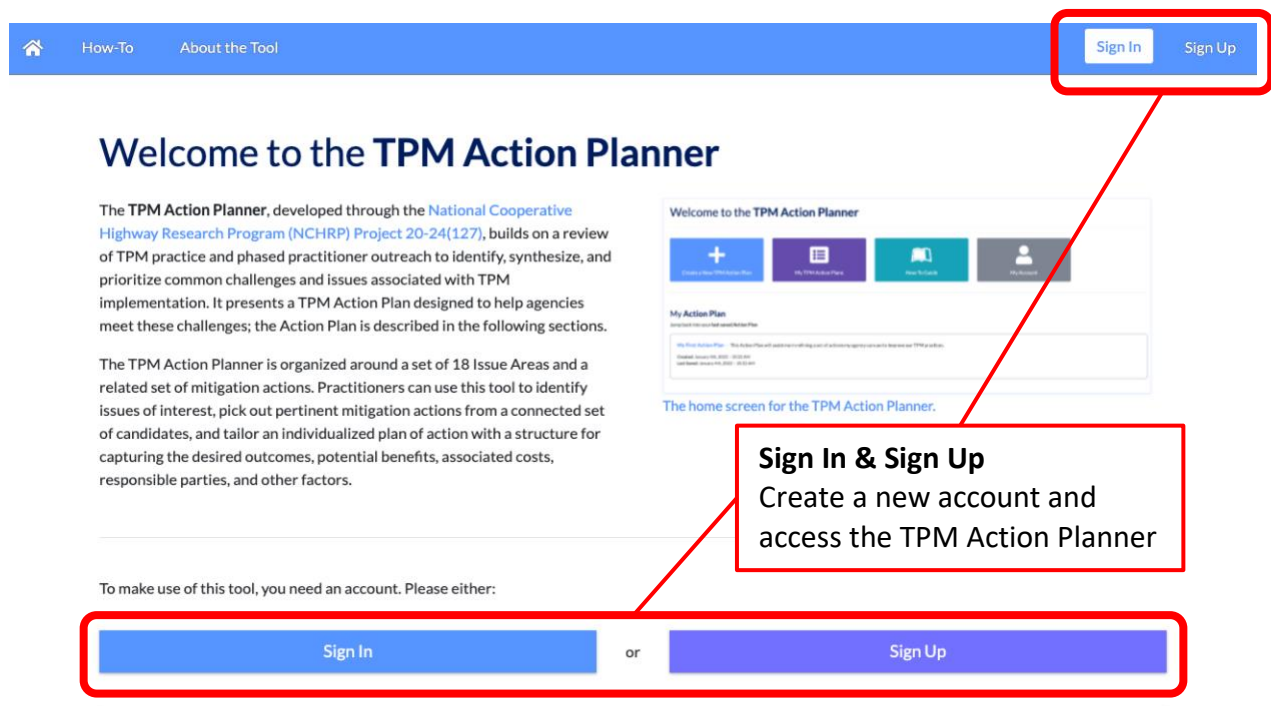


TPM Action Planner

User Guidebook

Homepage (Logged Out)

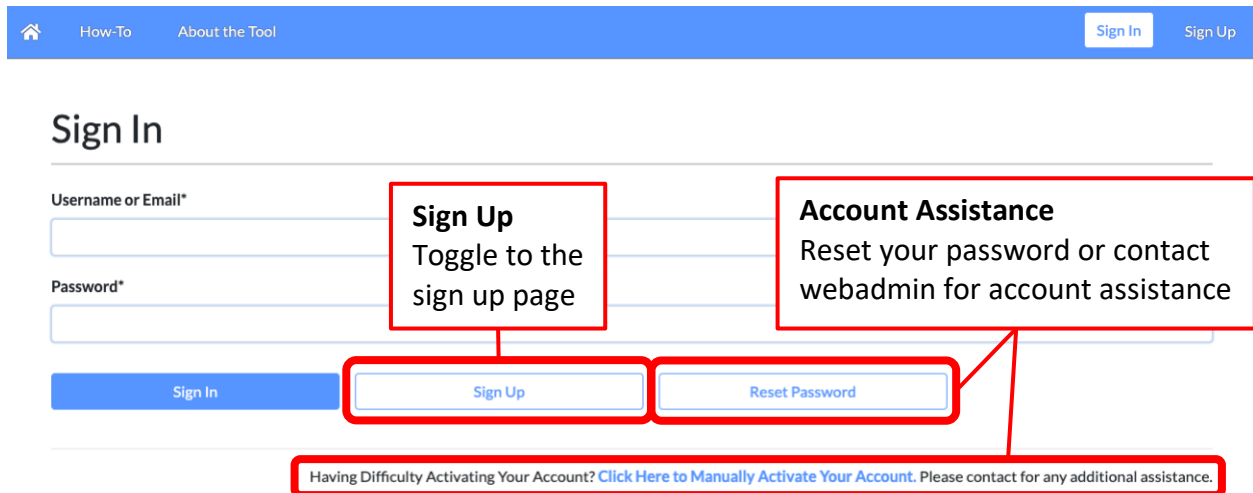
The homepage provides background on the NCHRP Project which developed the TPM Action Planner and shares ways that practitioners may wish to use the tool. The key items here are the **Sign In** and **Sign Up** buttons for current and new users.



There are several ways specific audiences may wish use this resource:

- **Agency practitioners and regional planning partners** facing a TPM issue or challenge may look through the tool's **TPM Issues** identify matching issues, and then use this document to reference the connected set of candidate mitigation actions. They may choose to prioritize the mitigation actions based on based on the anticipated cost or complexity, applicable performance area(s), or their agency's existing organizational priorities and other factors and may work collaboratively to more fully specify the costs and potential benefits.
- **An AASHTO or TRB Committee, Subcommittee or Topic-Area Work Group** developing research statements, an event-based workshop, or an organizational or strategic plan, may scope candidate mitigation actions by a particular mitigation type or strategy and prioritize among candidate mitigation actions within that type.
- **FHWA, FTA, AASHTO and other organizations** may use this tool to identify prioritized issues and their associated candidate mitigation actions to prioritize capacity-building efforts to advance TPM implementation. Depending on their area(s) of expertise, staff from these agencies and organizations may use the tool to direct their efforts at resolving issues within specific performance areas or related to specific TPM processes.

Sign In



The Sign In page features a blue header with navigation links: Home, How-To, About the Tool, Sign In, and Sign Up. The main content area has a 'Sign In' heading. Below it are input fields for 'Username or Email*' and 'Password*'. A blue 'Sign In' button is on the left, and 'Sign Up' and 'Reset Password' buttons are on the right. Annotations include a red box around the 'Sign Up' button with the text 'Sign Up Toggle to the sign up page', and another red box around the 'Reset Password' button with the text 'Account Assistance Reset your password or contact webadmin for account assistance'. A red-bordered box at the bottom contains the text: 'Having Difficulty Activating Your Account? [Click Here to Manually Activate Your Account](#). Please contact for any additional assistance.'

Sign In

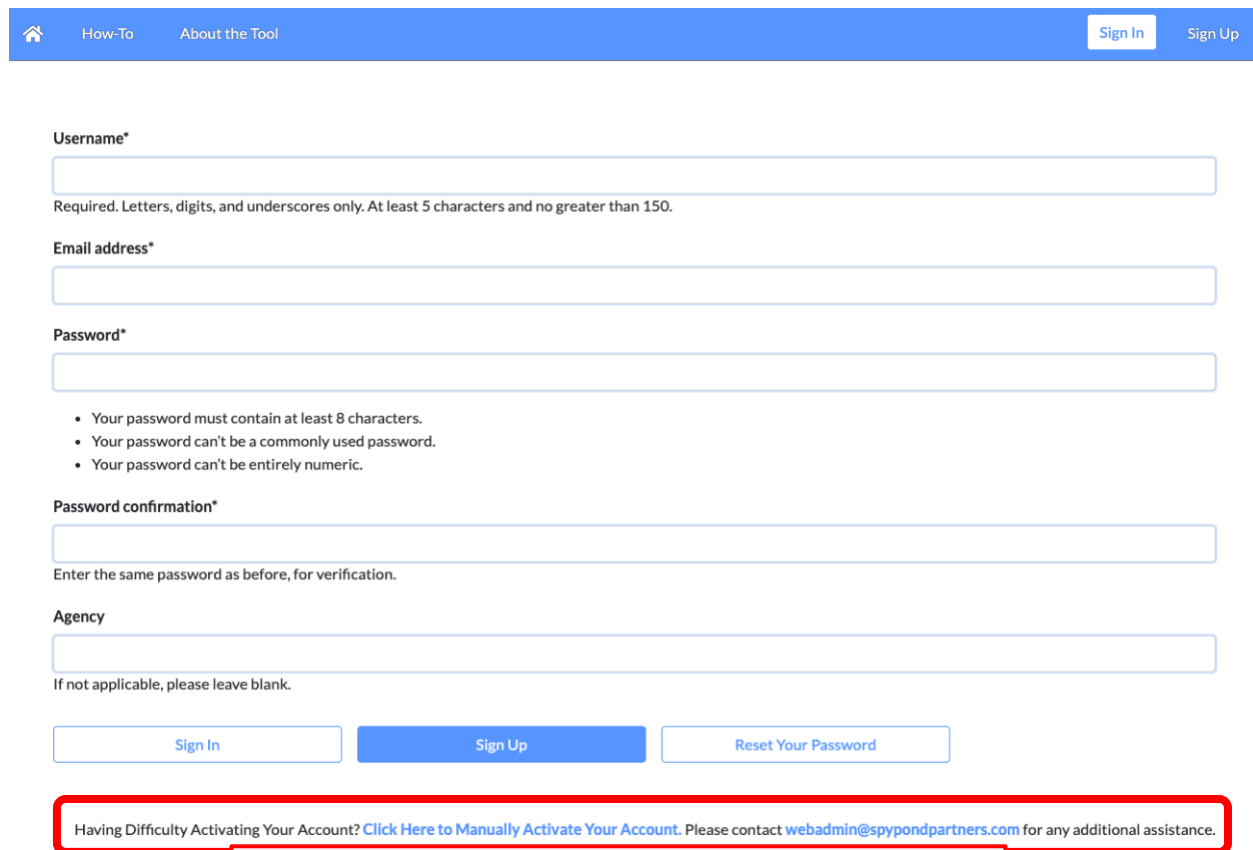
Sign Up

Reset Password

Having Difficulty Activating Your Account? [Click Here to Manually Activate Your Account](#). Please contact for any additional assistance.

Sign Up

When you sign up for the TPM Action Planner, you will receive a verification email from webadmin@spypondpartners.com. If you have any trouble with the verification link or manually entering the verification token, then please email webadmin@spypondpartners.com for more assistance.



The Sign Up page features a blue header with navigation links: Home, How-To, About the Tool, Sign In, and Sign Up. The main content area has a 'Sign Up' heading. Below it are input fields for 'Username*', 'Email address*', 'Password*', and 'Password confirmation*'. The 'Password*' field has a list of requirements: 'Your password must contain at least 8 characters.', 'Your password can't be a commonly used password.', and 'Your password can't be entirely numeric.'. The 'Password confirmation*' field has a note: 'Enter the same password as before, for verification.'. Below these is an 'Agency' input field with a note: 'If not applicable, please leave blank.'. At the bottom are three buttons: 'Sign In', 'Sign Up', and 'Reset Your Password'. A red-bordered box at the bottom contains the text: 'Having Difficulty Activating Your Account? [Click Here to Manually Activate Your Account](#). Please contact webadmin@spypondpartners.com for any additional assistance.'

Username*

Required. Letters, digits, and underscores only. At least 5 characters and no greater than 150.

Email address*

Password*

- Your password must contain at least 8 characters.
- Your password can't be a commonly used password.
- Your password can't be entirely numeric.

Password confirmation*

Enter the same password as before, for verification.

Agency

If not applicable, please leave blank.

Sign In

Sign Up

Reset Your Password

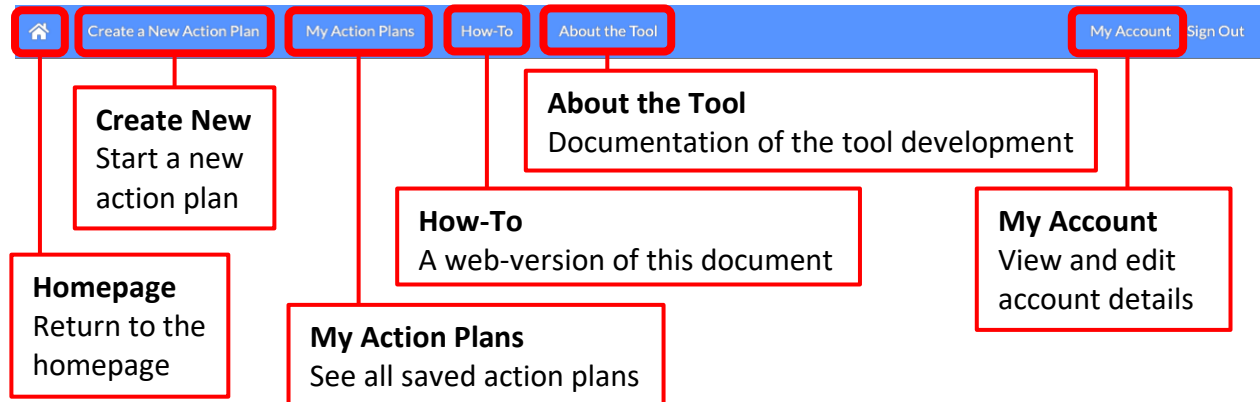
Having Difficulty Activating Your Account? [Click Here to Manually Activate Your Account](#). Please contact webadmin@spypondpartners.com for any additional assistance.

Need Assistance?

Reach out to webadmin@spypondpartners.com if you need any assistance creating or accessing your account.

Menu (Logged In)

The menu links to each page on the website.



Homepage (Logged In)

Once logged in, the homepage provides access to create and view your TPM Action Plans. You are able to start a new plan, see existing plans, access the how-to guide, or adjust your account settings from the four main buttons on the homepage or the top-level menu.

Beneath the key buttons, the homepage displays your most recently saved action plan. You may click on the plan to jump back into editing or view and print the final plan.



Welcome to the TPM Action Planner

The screenshot shows the TPM Action Planner homepage. The top section features four main buttons: "Create a New TPM Action Plan" (blue with a plus icon), "My TPM Action Plans" (purple with a list icon), "How-To Guide" (teal with a book icon), and "My Account" (grey with a person icon). A red box highlights the "Create a New TPM Action Plan" button, with a callout box stating "Create a New TPM Action Plan" and "Start a new plan". Below the buttons, the section "My Action Plan" is displayed, with a sub-header "Jump back into your last saved Action Plan". A red box highlights the "TPM Plan 2" entry, which shows the creation and last saved dates. A callout box below this entry states "My Action Plan" and "Select the latest action plan to view or continue editing".

Create a New TPM Action Plan
Start a new plan

My Action Plan
Jump back into your last saved Action Plan

TPM Plan 2
Created: May 5th, 2022 - 3:56 PM
Last Saved: May 5th, 2022 - 4:14 PM

My Action Plan
Select the latest action plan to view or continue editing

My Action Plans

View all of your action plans on this page. To edit or view the action plan, simply click on the action plan box.

[Home](#) [Create a New Action Plan](#) [My Action Plans](#) [How-To](#) [About the Tool](#) [My Account](#) [Sign Out](#)

My TPM Action Plans

You have 2 action plans

TPM Plan 2
Created: May 5th, 2022 - 3:56 PM
Last Saved: May 5th, 2022 - 4:14 PM

TPM Plan 1
Created: May 5th, 2022 - 11:34 AM
Last Saved: May 5th, 2022 - 3:55 PM

+ Create a New TPM Action Plan

My Action Plan
Click anywhere in the box to access your action plan again

My Account

Update your password, username, email, and agency from the My Account page.

[Home](#) [Create a New Action Plan](#) [My Action Plans](#) [How-To](#) [About the Tool](#) [My Account](#) [Sign Out](#)

admin_tpmtool
admin@spypondpartners.com

Need to [Change Your Password?](#)

Username*

Required. Letters, digits, and underscores only. At least 5 characters and no greater than 150.

Email address*

Please ensure your email is correct. If this email address is not valid, you will be unable to receive important notices from this website.


Agency

If not applicable, please leave blank.

[Update](#)

Create a New TPM Action Plan

When you first create a new TPM action plan, you must choose a name and description for your plan. Both of these things may be edited later on in the process.

 [Create a New Action Plan](#) [My Action Plans](#) [How-To](#) [About the Tool](#) [My Account](#) [Sign Out](#)

Create a New TPM Action Plan

Name
Give your action plan a name.

Description
Add helpful text here to describe your action plan.

Create
You must choose a name for your action plan before you can move on to the next step

[Back](#) [Create](#)

Scope My Action Plan

The first step in creating a new action plan is deciding the plan's scope. Select the items you are interested in from each category. You must pick at least one element from each category: tiers, themes, performance areas, and mitigation strategies. The more elements you select, the more options you will have for issue areas in the second step, as these elements generate the potential issue areas you might wish to pursue.

1. Scope My Action Plan

2. Identify My Issue Areas

3. Identify My Issues

4. Build My Set of Actions

5. View My Action Plan

My Action Plan Name

TPM Plan 3

My Action Plan Settings

Stats & Progress

Scope My Action Plan

Select all items you want to apply to your Action Plan. Please select at least one checkbox from each category.

Tiers	Themes	Performance Areas	Mitigation Strategies
<input type="checkbox"/> Most Critical Issues	<input type="checkbox"/> Ability to Support Decision-Making	<input type="checkbox"/> Safety	<input type="checkbox"/> Engagement
<input type="checkbox"/> Critical Issues	<input type="checkbox"/> Alignment of Reporting and Management Responsibilities	<input type="checkbox"/> Bridge	<input type="checkbox"/> Guidance
<input type="checkbox"/> Less Critical Issues	<input type="checkbox"/> Data Availability and Quality	<input type="checkbox"/> Pavement	<input type="checkbox"/> Research
	<input type="checkbox"/> Integration with Agency Business Processes and Practices	<input type="checkbox"/> Mobility	<input type="checkbox"/> Training
		<input type="checkbox"/> Emissions	<input type="checkbox"/> Policy/Regulation
		<input type="checkbox"/> Transit	
		<input type="checkbox"/> Freight	
		<input type="checkbox"/> Broad TPM	
		<input type="checkbox"/> Cross-Cutting	

Next Step
Select the items you're interested in, then hit Next Step

Next Step

My Action Plan Settings
Edit the Name and Description of your action plan

Stats & Progress
Track how many Issue Areas, Issues, and Actions have been scoped and selected

My Action Plan Settings

Stats & Progress

Name

TPM Plan 3

Description

Add helpful text here to describe your action plan.

Delete This Action Plan

My Action Plan Settings

Stats & Progress

My Plan Breakdown

Issue Areas Selected

0

Of 0 Scoped Issue Areas

Issues Selected

0

Of 0 Scoped Issues

Actions Selected

0

Of 0 Scoped Actions

Tiers: Issue areas are rated on their criticality, derived from a composite criticality index evaluating the issue area’s urgency and importance.

Themes: Issue areas are grouped into four themes, with only one theme per issue area.

- Theme 1: Ability to Support Decision-Making
- Theme 2: Alignment of Reporting and Management Responsibilities
- Theme 3: Data Quality and Reliability
- Theme 4: Integration with Agency Business Processes and Practices

Performance Areas: Issues are tagged with performance areas which describe the key metric each issue addresses.

Mitigation Strategies: Issues are assigned mitigation strategies via a many-to-many relationship, so each mitigation strategy may apply to more than one issue and each issue may have multiple mitigation strategies.

- **Engagement** – facilitating communication between different stakeholders
- **Guidance** – preparing supplemental or improved guidance documents
- **Research** – gathering information, performing analysis, or developing a recommendation (including for new data or software tools)
- **Training** – developing training materials
- **Policy/Regulatory** – changing regulations, typically at the federal level

There are 18 Issue Areas, 68 Issues, and 97 Mitigation Strategies. Each Issue Area has one or more related Issues, and each Issue has at least two Mitigation Strategies. The following tables map the breakdown of Issue Areas, Issues, and Mitigation Strategies based on the selected scope elements.

Table 1. Count of Issue Areas for each combination of Theme and Tier

	<i>Most Critical Issues</i>	<i>Critical Issues</i>	<i>Less Critical Issues</i>	Total
<i>Theme 1</i>	2	1	1	4
<i>Theme 2</i>	2	1	1	4
<i>Theme 3</i>	0	1	4	5
<i>Theme 4</i>	3	2	0	5
Total	7	5	6	18

Table 2. Count of Issues for each Performance Area

	<i>Safety</i>	<i>Bridge</i>	<i>Pavement</i>	<i>Mobility</i>	<i>Emissions</i>	<i>Transit</i>	<i>Cross-Cutting</i>
Count	10	10	17	13	7	5	6

Table 3. Count of Mitigation Actions under each Mitigation Strategy

	<i>Engagement</i>	<i>Guidance</i>	<i>Research</i>	<i>Training</i>	<i>Policy/Regulation</i>
Count	25	22	24	13	13

Identify My Issue Areas

In the second step, identify which Issue Areas to include in your action plan. Different Issue Areas are available for selection based on the Theme and Tiers chosen in step 1; each Issue Area is categorized under a single Theme and single Tier. To see all 18 Issue Areas, return to step 1 and select all of the Tiers and Themes.

The screenshot shows the 'Identify My Issue Areas' step of a five-step process. The top navigation bar includes steps: 1. Scope My Action Plan, 2. Identify My Issue Areas (active), 3. Identify My Issues, 4. Build My Set of Actions, and 5. View My Action Plan. Below the navigation bar, there's a header area with 'My Action Plan Name' (TPM Plan 3), a 'Change My Scope' button, and links for 'My Action Plan Settings' and 'Stats & Progress'. The main title is 'Identify my Issue Areas'. A sub-header states: 'Select issue areas that you would like to identify in your Action Plan. Only issue areas matching your Action Plan Scope are available.' Below this, it says '2 Issue Areas fit your scope'. The first issue area is 'Limited Experience Modeling and Forecasting', with a 'Rank 1' and 'Tier Most Critical Issues'. It has a COVID-19 symbol icon. The second issue area is 'Communicating National vs. State Measures', with a 'Rank 3' and 'Tier Most Critical Issues'. Annotations with red boxes and lines point to various elements: 'Change My Scope' button, 'More/Less Detail' toggle, 'Covid Symbol', 'Rank', 'Less Detail' button, 'Next Step' button, and 'Next Step' text.

1. Scope My Action Plan

2. Identify My Issue Areas

3. Identify My Issues

4. Build My Set of Actions

5. View My Action Plan

My Action Plan Name
TPM Plan 3

Change My Scope

My Action Plan Settings

Stats & Progress

Identify my Issue Areas

Select issue areas that you would like to identify in your Action Plan. Only issue areas matching your Action Plan Scope are available.

2 Issue Areas fit your scope

Limited Experience Modeling and Forecasting
Theme: Ability to Support Decision-Making
Some agencies have limited experience predicting the future performance of bridges. While State DOTs have established methods to predict performance of bridge engineering decisions for highway safety, bridge and pavement, predictive capabilities are less mature in the other areas.

Communicating National vs. State Measures
Theme: Ability to Support Decision-Making
Federal measures may be challenging to communicate and are often different from state/agency measures.

Example Applications
One State DOT has developed a target setting methodology based on historical trends for future performance in several performance measures. The approach based on existing data has several benefits. The practice in testing and discussing confidence levels with historical, data-informed target setting process for performance when the aim is to predict future performance rather than targets. However, the agency has noted several long-term trends in this example, the data used for projecting performance trends is not linked to the agency's planning and programming documents. It requires a minimal level of modeling knowledge and assumes that past results can be used to predict the near-term future.

More/Less Detail
Toggle to see the Practitioner Inputs and Example Applications

Covid Symbol
Indicates an Issue Area impacted by the COVID-19 pandemic

Rank
A number from 1 to 18 reflecting the Issue Area's criticality level (uncertainty and importance).

Less Detail

Next Step
Select your desired Issue Area(s) then hit Next Step

Previous Step

Next Step

Identify My Issues

In step 3, select the specific Issues to include in the action plan. There are a total of 68 potential issues, though the number available in this step will depend on which Performance Areas and Issue Areas were selected in the previous steps. Each Issue has only one Performance Area and one Issue Area, though there may be multiple issues with the same combination.

In the example below, every Performance Area is included in the document scope, but only one Issue Area was brought forward, so only six Issues are available. At any time in the process, you may return to a previous step and adjust the selections to make more Issues available.

The screenshot shows a multi-step process interface. At the top, five steps are listed: 1. Scope My Action Plan, 2. Identify My Issue Areas, 3. Identify My Issues (highlighted with a red box), 4. Build My Set of Actions, and 5. View My Action Plan. Below this, a header bar displays 'My Action Plan Name: TPM Plan 3' and three buttons: 'Change My Scope', 'My Action Plan Settings', and 'Stats & Progress'. The main heading is 'Identify My Issues'. A sub-header states: 'Select issues that you would like to identify in your Action Plan. Only issues matching your Action Plan Scope and Issue Areas are available.' Below this, it says '6 Issues fit your scope and selections'. A list of six issues is shown, each with a red gear icon, 'Issue Area: Limited Experience Modeling and Forecasting', a 'Performance Area' (Safety, Bridge, Pavement, Mobility, Emissions), a descriptive text snippet, and a selection radio button. A red box highlights the radio buttons for the first three issues. At the bottom, two callout boxes provide navigation instructions. The 'Previous Step or Steps' box points to a 'Previous Step' button. The 'Next Step' box points to a 'Next Step' button.

1. Scope My Action Plan 2. Identify My Issue Areas **3. Identify My Issues** 4. Build My Set of Actions 5. View My Action Plan

My Action Plan Name
TPM Plan 3

[Change My Scope](#) [My Action Plan Settings](#) [Stats & Progress](#)

Identify My Issues

Select issues that you would like to identify in your Action Plan. Only issues matching your Action Plan Scope and Issue Areas are available.

6 Issues fit your scope and selections

- Issue Area:** Limited Experience Modeling and Forecasting
Performance Area: Safety
There are no standard approaches for modeling and forecasting safety performance.
- Issue Area:** Limited Experience Modeling and Forecasting
Performance Area: Bridge
Agencies have bridge management systems but may not have used them for modeling and forecasting or may rely on trend analysis rather than modeling for target setting.
- Issue Area:** Limited Experience Modeling and Forecasting
Performance Area: Pavement
Agencies have pavement management systems but may not have utilized them for modeling and forecasting or may rely on trend analysis rather than modeling for target setting.
- Issue Area:** Limited Experience Modeling and Forecasting
Performance Area: Mobility
There are no standard approaches for modeling and forecasting for mobility. Some agencies lack experience performing system-wide modeling and forecasting for system performance measures.
- Issue Area:** Limited Experience Modeling and Forecasting
Performance Area: Emissions
There are no standard approaches for modeling and forecasting. Some agencies lack experience performing system-wide modeling and forecasting for system performance measures.

Previous Step or Steps
At any point, navigate to a previous step to edit the selection

Previous Step

Next Step
Select the Issues to advance to the action-selection step

Next Step

Build My Set of Actions

Choose the Mitigation Actions that best suit your agency's goals. The Actions presented depend on the Issues picked in step 3 and the Mitigation Strategies from step 1.

1. Scope My Action Plan

2. Identify My Issue Areas

3. Identify My Issues

4. Build My Set of Actions

5. View My Action Plan

My Action Plan Name
TPM Plan 3

Change My Scope

My Action Plan Settings

Stats & Progress

Build My Set of Actions

The following actions are recommended for addressing the issues you've selected. Select the actions you would like to Toggle into **Evaluation Mode** to focus on evaluating the actions you've selected. You can evaluate the actions in your Action Plan on cost, potential, barriers, and many other facets. Only actions matching your **Action Plan Scope** and previous selections are available.

Control Panel

☐ Evaluation Mode

Show Issues Addressed

7 Actions fit your scope and selections
You have selected 0 Actions for your Action Plan

Action #2

Mitigation Strategy: Engagement

Develop a peer exchange(s), webinar(s), or similar forum for State DOTs, MPOs and transit operators to share practices in the use of management systems for modeling and forecasting future bridge, pavement and other asset performance.

Helpful Resources: [TPM Portal](#)

Issue(s) Addressed:

- Bridge - Agencies have bridge management systems but may not have used them for modeling and forecasting for target setting.
- Pavement - Agencies have pavement management systems but may not have utilized them for modeling and forecasting for target setting.

☐

Evaluate ▼

Action #3

Mitigation Strategy: Engagement

Develop a peer exchange(s), webinar(s), or similar forum for State DOTs and MPOs to share practices in modeling and forecasting for mobility and emissions measures.

Issue(s) Addressed:

- Mobility - There are no standard approaches for modeling and forecasting for mobility. Some agencies lack experience performing system-wide modeling and forecasting for system performance measures.

☐

Evaluate ▼

Action #4

Mitigation Strategy: Guidance

Previous Step

Next Step

Evaluate
Toggle Evaluation Mode to customize edits for your selected actions

Next Step
Check all the desired Actions, make edits via Evaluate, then continue

If you open Evaluation Mode, you will be presented with a series of different options for customizing your action. You don't need to do anything special to save your edits, as all edits are saved automatically.

Action #3

Mitigation Strategy: Engagement

Develop a peer exchange(s), webinar(s), or similar forum for State DOTs and MPOs to share practices in modeling and forecasting for mobility and emissions measures.

Issue(s) Addressed:

- Mobility - There are no standard approaches for modeling and forecasting for mobility. Some agencies lack experience performing system-wide modeling and forecasting for system performance measures.

Evaluate Action

Default values are pulled from the results of NCHRP Project 20-24(127). Please modify these fields to customize your Action Plan.

Performance Area Detail

Responsible Agencies

AASHTO x DOTs x FHWA x Large MPOs x Medium MPOs x TPM Pooled Fund x

Stakeholder Agencies

DOTs x MPOs x Transit Operators x

Responsible Agencies Detail

Stakeholder Agencies Detail

Info Needed

Stakeholder input on topics, noteworthy practices

Barriers

Existence of noteworthy practices for predicting or setting desired mobility and emissions performance, funding.

First Step

Determine the topic(s) with stakeholder input, review Regional Exchange Toolbox resources at:

Complexity

Medium-High

Potential

Medium

Cost Low

\$

Cost High

\$\$

Complexity Detail

Potential Detail

Cost Detail

Contract Cost

\$

Software Cost

\$

Other Cost

\$

Agency Staff Hours

Other Partner Hours

Implementation Timeframe

Other Notes

My Action Plan

In the final step, you can see your action plan through several different views, review the Issue Areas and Issues selected, and download a PDF version of your plan too. The PDF copy will contain the customized edits made in the Evaluation Mode of step 4.

Previous Steps

Edit any prior selection

1. Scope My Action Plan

2. Identify My Issue Areas

3. Identify My Issues

4. Build My Set of Actions

5. View My Action Plan

Download My Plan

Open a PDF-version to view or print

Download My Plan

My Action Plan

My Actions

Actions Grouped by Issues

All

Stats & More

Issue Areas

1 Selected

- Limited Experience Modeling and Forecasting ⓘ

Issues

3 Selected

- **Bridge** - Agencies have bridge management systems but may not have used them for modeling and forecasting or may rely on trend analysis rather than modeling for target setting. ⓘ
- **Pavement** - Agencies have pavement management systems but may not have utilized them for modeling and forecasting or may rely on trend analysis rather than modeling for target setting. ⓘ
- **Mobility** - There are no standard approaches for modeling and forecasting for mobility. Some agencies lack experience performing system-wide modeling and forecasting for system performance measures. ⓘ

Actions

3 Selected

- Develop a peer exchange(s), webinar(s), or similar forum for State DOTs and MPOs to share practices in modeling and forecasting for mobility and emissions measures. ⓘ
- Conduct research on new national data sets and methods for forecasting and modeling. ⓘ
- Promote existing training to understand forecasting and modeling approaches, methods, tools and the use of management systems for forecasting and modeling. ⓘ

Toggle Action View

Use these buttons to switch between views and highlight different aspects of the action plan

More Info

Open a shadow-box with additional information about the Issue Area, Issue, or Action.