

# Destination 2040: PACTS' Long-Range Transportation Plan

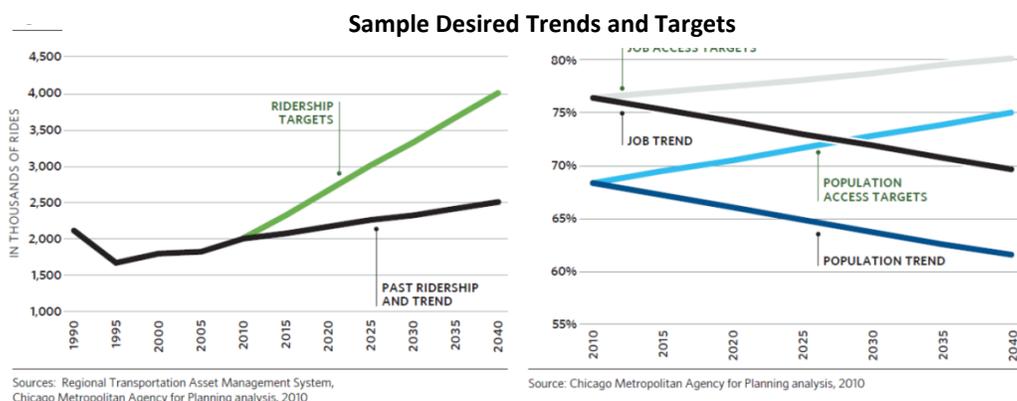
## Chapter 5: Desired Trends, Performance Measures, and Targets

The PACTS region is a vibrant, growing, economic center that is changing more rapidly than any other region in the State of Maine. The *Destination 2040* Plan is required by our federal partners; however, the benefits of a well-developed plan and its implementation accrue to the stakeholders in the region. Plans are developed with many benefits in mind, but generally to “improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations.”<sup>1</sup> *Destination 2040* has been developed with new guidance that helps to monitor and measure the Plan’s effectiveness through a performance-based planning and programming structure. This chapter identifies the desired impacts of the Plan in specific measurable categories important to the region. However, these are not the only desired impacts of the Plan.

### Identifying Desired Trends or Targets

While a performance measure allows for comparison and analysis over time, a performance-based transportation plan identifies many desired directional trends that are the intended results of plan implementation for the region. The objectives and strategies in the Plan (e.g., reduce, increase, maintain), and/or targets (specific numerical figures) are meant to lead to the Goals of the plan. Progress can be measured through the performance measures when a base line of data is established at the onset of Plan implementation. A target clarifies the level of performance on a specific measure or a direction to achieve within a specified amount of time in order to make progress toward achieving the overall transportation plan’s goals and objectives.

As of the final drafting of the *Destination 2040 Plan*, federal guidance on the development of targets and specific qualitative and quantitative targets were not established for MPOs by the FHWA. This Chapter establishes performance measures and the “directional” desired trends intended to result from the Plan. Directional desired trends identify a direction of impacts desired. The examples below show two different graphic applications of targets versus trends. The left graphic shows the desired trend from the past trend for transit ridership. The right graphic shows two trend lines: the first a desired increase in population access to transit, and the second job access to transit.



Source: Chicago Metropolitan Agency for Planning, *Go To 2040*, Page 294.

<sup>1</sup> American Planning Association (APA)

# ***Destination 2040: PACTS' Long-Range Transportation Plan***

## **Performance Measures Process Development**

As described in Chapter 2, federal law now requires that PACTS develop a performance measurement system in order to gauge future progress made with the investments in our region's transportation system using federal funds. The Federal Highway and Transit Administration (FHWA and FTA) require PACTS to have a set of performance measures in *Destination 2040*, and will require us to develop transportation system performance targets once official guidance is available.

During the recent past, PACTS staff and committees have laid the foundation for PACTS' performance measurement system through these various efforts:

- Attended federal webinars on performance-based transportation planning, read various FHWA guidance documents, and read the FHWA's *Performance-Based Planning and Programming Guidebook*.
- Compiled an initial set of performance measures in our 2013 federally-required *PACTS Congestion Management Process Plan*.
- Reviewed a wide array of potential performance measurements with our Long Range Transportation Plan Advisory Committee, including those compiled in the Sustain Southern Maine planning process.
- Coordinated with MaineDOT:
  - Communicated with their Results and Information Office which is leading their performance measures work.
  - Reviewed their safety core outcome performance measures and targets.
  - Reviewed the draft list of public transportation performance measures in their *2015 Maine Strategic Transit Plan 2025* (and our Transit Committee and staff began working on transit performance measures for our region).
- Reviewed the regional transportation system data currently available for our region as collected by MaineDOT, the Turnpike Authority, our transit systems and our municipalities.
- Reviewed the performance measures developed by numerous metropolitan planning organizations, and looked closely at the measures developed for the Burlington (VT) and Worcester (MA) regions.
- Performed a statistically significant regional public opinion survey in which we asked about people's travel behavior in addition to their opinions on various topics. This 2014 survey had questions similar to our 2008 survey.
- Began to collect new data regarding bicycle and pedestrian travel, and average travel speeds at 75 locations in the region based on probe data sources.

## Destination 2040: PACTS' Long-Range Transportation Plan

In 2016 our federal agency partners will provide more specific guidance on performance measures and targets. Consequently, PACTS has budgeted planning resources to do the following during 2016 and 2017:

- Work with MaineDOT and our federal agency partners to learn what will be required, and to learn what MaineDOT will do regarding state transportation system performance targets.
- Continue to collect regional transportation system data and determine recent trends for our region.
- Work with our PACTS members to review the performance measures in the three tables below, and establish performance targets.
- Incorporate certain performance targets into the PACTS capital project selection process.

### Transportation Performance Management Framework in MAP-21

FHWA is currently working with states and metropolitan planning organizations to transition toward and implement a performance based approach to carrying out the Federal Highway Program known as Transportation Performance Management. Transportation Performance Management represents the opportunity to prioritize needs, and align resources for optimizing system performance in a collaborative manner. This transition was instituted in the federal legislation known as MAP-21 or "Moving Ahead for Progress in the 21st Century". This legislation integrates performance into many federal transportation programs and contains several performance elements. Below is a federal framework graphic that illustrates the pieces and relationships between them, including how PACTS' targets will fit in.



## Destination 2040: PACTS' Long-Range Transportation Plan

Presented in Table 5-1 below is the initial set of PACTS regional transportation system performance measures. As further guidance on system performance is provided, it is PACTS' intent to expand and adapt this list – add to, delete from, or change as necessary. The table shows the PACTS region recent trend in each measure, the data source for each trend and the desired future trend for each measure.

**Table 5-1**  
**Initial Set of PACTS Region Transportation System Performance Measures**

<b><u>Performance Measure</u></b>	<b><u>PACTS Region Recent Trend</u></b>	<b><u>Trend Data Source</u></b>	<b><u>PACTS Desired Trend</u></b>
<b>1 Crashes</b>	<b>Decreasing</b>	<b>MaineDOT</b>	<b>Decrease</b>
<b>2 Bus, ferry and rail ridership</b>	<b>Increasing</b>	<b>Transit systems</b>	<b>Increase</b>
<b>3 Paratransit ridership</b>	<b>Increasing</b>	<b>Demand Response Transit Providers</b>	<b>Increase</b>
<b>4 Driving alone to work</b>	<b>Increasing</b>	<b>Census Bureau PACTS Survey</b>	<b>Decrease</b>
<b>5 Daily vehicle miles traveled (VMT) per person</b>	<b>Decreasing</b>	<b>?</b>	<b>Reduce</b>
<b>6 Time taken to restore traffic flow after an incident</b>	<b>Decreasing</b>	<b>MaineDOT and the Turnpike Authority?</b>	<b>Decrease</b>
<b>7 Time wasted due to recurring congestion on our highways</b>	<b>?</b>	<b>Future PACTS speed data at selected locations</b>	<b>Decrease</b>
<b>8 Participation in the GoMaine rideshare program</b>	<b>Stable</b>	<b>GoMaine Program</b>	<b>Increase</b>
<b>9 Trips by Bicycle</b>	<b>Increasing</b>	<b>PACTS 2014 Survey</b>	<b>Increase</b>

PACTS will work with the Table 5-1 measures and the potential additional measures in Table 5-2 to generate a comprehensive range of regional transportation system performance targets during 2016 and 2017. *It is important to note that Tables 5-1 and 5-2 are not a complete set of potential measures, and that PACTS will consider other measures during the 2016 and 2017 work.*

# Destination 2040: PACTS' Long-Range Transportation Plan

Table 5-2

## Other Potential PACTS Region Transportation System Performance Measures

<u>Potential Measure</u>	<u>Report Reference</u>
<b>Safety</b>	
1 Traffic accident serious injuries	MaineDOT's Statewide Safety Perform. Measures
2 Traffic accident fatalities	MaineDOT's Statewide Safety Perform. Measures
3 Traffic/bicycle crashes	MaineDOT's Statewide Safety Perform. Measures
4 Traffic/pedestrian crashes	MaineDOT's Statewide Safety Perform. Measures
<b>Travel in Non-SOV Modes</b>	
5 Park and ride lot utilization	PACTS 2013 Congestion Management Process Plan
6 Carpool, walk, bicycle and transit mode share	PACTS 2013 Congestion Management Process Plan
7 Bus transfer wait times at pulse points	PACTS 2013 Congestion Management Process Plan
8 Bus peak loading	PACTS 2013 Congestion Management Process Plan
9 Job accessibility by bus within average commute time	PACTS 2013 Congestion Management Process Plan
10 Bus on-time arrival	PACTS 2013 Congestion Management Process Plan
11 There are 21 proposed transit system performance measures in the 2015 Maine Strategic Transit Plan. The PACTS Transit Committee and staff began reviewing them in December 2015.	
<b>Travel Delays</b>	
12 Person hours of delay by mode	PACTS 2013 Congestion Management Process Plan
13 Delay caused by freight deliveries	PACTS 2013 Congestion Management Process Plan
14 80th percentile travel time index	PACTS 2013 Congestion Management Process Plan
<b>Preservation of the Existing System</b>	
15 Miles of collector roads eligible for PACTS preservation paving funds	PACTS 2014 Regional Collector Roads Assessment
16 Miles of arterial roads in good condition	PACTS 2015 Regional Arterial Roads Assessment
17 Bridges in good condition	MaineDOT
18 Walking/biking infrastructure	PACTS 2013 Congestion Management Process Plan
19 Sustainable transportation funding	Burlington (VT) regional transportation plan
<b>Other</b>	
20 Electric vehicle registrations	Burlington (VT) regional transportation plan
21 Freight mode shares for rail, air and water	PACTS 2013 Congestion Management Process Plan
22 Jobs access within average commute time	PACTS 2013 Congestion Management Process Plan

# Destination 2040: PACTS' Long-Range Transportation Plan

Table 5-3 below shows how the measures in Tables 5-1 and 5-2 address the following federal guidance factors regarding performance-based transportation system planning. *Note that the table shows only the primary factor for each measure rather than the several factors that could apply to each measure.*

**Table 5-3**

**Potential PACTS Region Transportation System Performance Measures  
And the Federal Transportation Priority Areas**

<u>Performance Measures (from Table 5-1)</u>	<u>National Performance</u>	
	<u>Areas</u>	<u>Federal Planning Factors</u>
1 Crashes	Safety	Safety
2 Bus, ferry and rail ridership	System reliability	Economic vitality
3 Paratransit ridership	Not applicable	Accessibility and mobility
4 Driving alone to work	Congestion reduction	Environment
5 Daily vehicle miles traveled per person	Congestion reduction	Environment
6 Time taken to restore traffic flow after an incident	Safety	Management and operation
7 Time wasted due to recurring congestion on our highways	System reliability	Management and operation
8 Participation in the GoMaine rideshare program	Environmental sustainability	Environment
9 Bicycle travel	Environmental sustainability	Accessibility and mobility
<u>Performance Measures (from Table 5-2)</u>		
1 Traffic accident serious injuries	Safety	Safety
2 Traffic accident fatalities	Safety	Safety
3 Traffic/bicycle crashes	Safety	Safety
4 Traffic/pedestrian crashes	Safety	Safety
5 Park and ride lot utilization	Congestion reduction	Environment
6 Carpool, walk, bicycle and transit mode share	Environmental sustainability	Environment
7 Bus transfer wait times at pulse points	System reliability	Management and operation
8 Bus peak loading	System reliability	Management and operation
9 Job accessibility by bus within average commute time	Freight/Economic	
10 Bus on-time arrival	System reliability	Management and operation
11 21 proposed transit measures in the 2015 Maine Strategic Transit Plan	System reliability	Management and operation
12 Person hours of delay by mode	Congestion reduction	Management and operation
13 Delay caused by freight deliveries	Congestion reduction	Management and operation
14 80th percentile travel time index		
15 Miles of collector roads eligible for PACTS preservation paving funds	Infrastructure condition	Preserve existing system
16 Miles of arterial roads in good condition	Infrastructure condition	Preserve existing system
17 Bridges in good condition	Infrastructure condition	Preserve existing system
18 Walking/biking infrastructure	Infrastructure condition	
19 Sustainable transportation funding	Infrastructure condition	Preserve existing system
20 Electric vehicle registrations	Environmental sustainability	Environment
21 Freight mode shares for rail, air and water	Freight/Economic	Economic vitality
22 Jobs access within average commute time	Freight/Economic	Economic vitality

# ***Destination 2040: PACTS' Long-Range Transportation Plan***

## **Seven National Performance Areas**

1. **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.
3. **Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System.
4. **System Reliability** – To improve the efficiency of the surface transportation system.
5. **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental Sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced Project Delivery Delays** – To 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.

## **Eight National Planning Factors**

The *Destination 2040* Plan directs the planning and project activities for PACTS in developing eligible projects for the Transportation Improvement Program (TIP). The regional TIP is then included in the statewide plans of the Maine DOT. Federal law requires all MPOs to consider each of the eight factors<sup>2</sup> below in LRTP development. Therefore, the performance measures address these areas as well:

1. **Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.**
2. **Increase the safety of the transportation system for motorized and non-motorized users.**
3. **Increase the security of the transportation system for motorized and non-motorized users.**
4. **Increase the accessibility and mobility of people and for freight.**
5. **Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.**
6. **Enhance the integration and connectivity of the transportation system, across and between modes for people and freight.**
7. **Promote efficient system management and operation.**
8. **Emphasize the preservation of the existing transportation system.**

---

<sup>2</sup> Source: 23 Code of the Federal Regulations Section 450.306