

## Introduction

North/West Passage completed an [ITS Integrated Corridor Strategic Plan](#) in July 2007. The plan outlined transportation issues within the corridor and established a vision with corresponding goals and objectives for the pooled fund. An ITS architecture and an inventory of ITS devices deployed along I-90 and I-94 were also included in the plan. The inventory was completed to help the states understand what had been deployed and to provide insight into the states' experiences with various technologies, technology preferences, and the potential for further deployment. The Strategic Plan also included a series of prospective projects through 2012 based on the inventory and corridor goals.

Many of the projects identified in the plan have been completed, along with several other projects related to the corridor goals and objectives. Additional ITS devices have also been deployed in the corridor. As the North/West Passage states considered future work plans for the pooled fund, in 2013 a project was approved ([Project 7.1: Goal Assessment and Planning for ITS Corridor Deployment](#)) to assess their progress. Projects that have been completed to-date were mapped against each of the Strategic Plan goals as an initial indicator of progress. That information was then shared with the member states and a series of interviews were conducted to gather each state's impressions of progress toward the stated vision and goals. Finally, an updated inventory of ITS deployments in the corridor was reviewed as an additional assessment of progress. In addition, specific updates were made to the [issues, vision, goals and objectives](#) as well as [project ideas](#) to consider for 2013-2018.

In 2018, the North/West Passage members began planning for the next 5 years as the project ideas identified for 2013-2018 were all complete. This document presents the updates to issues, vision, goals, and objectives that will be used by the North/West Passage program in the development of future work plans.

## Common Issues, Problems or Needs

When developing the initial plan in 2007 and updating the issues, vision, goals and objectives in 2013, the North/West Passage states were asked to identify issues, problems and needs that were common in the corridor. Select ITS architecture, strategic planning and deployment documents from several states were also reviewed for issues related to the I-90/I-94 corridor. Issues were grouped into three broad categories – Traveler Information, Maintenance and Operations, and Planning and Program Management. In the five years since the revisions to the set of issues were identified, the transportation environment has changed significantly enough to generate new focus areas. Table 1 includes the updated corridor focus areas (Traveler Information, Maintenance and Operations, Planning

### Focus Areas

- Traveler Information
- Maintenance and Operations
- Planning and Program Management
- Staffing and Resources
- Connected and Automated Vehicles
- Freight

and Program Management, Staffing and Resources, Connected and Automated Vehicles, and Freight). In addition, related common issues, problems or needs of the members within each focus area were documented based on input from the North/West Passage states in 2018.

## **Vision**

In addition to the issues, problems and needs that were identified in the 2007 Strategic Plan, a vision was established. The vision provided a framework to guide the states' future projects in the corridor.

The vision has been reviewed each year at the North/West Passage annual meetings, and periodically modified. Following is the current vision for North/West Passage.

*The vision of the North/West Passage Corridor is to focus on developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders.*

Based on North/West Passage members' most recent feedback, no further changes to the vision are recommended. All members are content with this version that was recommended in 2010.

## **Updated Goals, and Objectives**

Building off the issues identified for the corridor and the vision that was established for the North/West Passage program, an overall goal was developed for each of the six focus areas (Traveler Information, Maintenance and Operations, Planning and Program Management, Staffing and Resources, Connected and Automated Vehicles, and Freight). To supplement the goals and focus, a series of objectives were also developed. The goals and objectives reflect the unique issues and needs of the North/West Passage corridor but also relate to common transportation priorities within the individual states. Table 1 present the updated goals and objectives, reflecting member input and the current transportation environment for each of the 6 focus areas.

**Table 1: North/West Passage Common Issues, Problems or Needs and Corresponding Goals and Objectives for each Focus Area**

Focus Area	NWP Member’s Common Issues, Problems, or Needs	Goals and Objectives
<p><b>Focus Area 1:</b> Traveler Information</p>	<ul style="list-style-type: none"> <li>• Lack of consistent and adequate corridor-focused traveler information (e.g. corridor DMS weather condition messages).</li> <li>• Ongoing demand for resources to update and maintain traveler information across multiple services (e.g. phone, web, social media, apps).</li> <li>• Information for commercial vehicle travelers varies from state to state across the corridor.</li> <li>• States continue to search for opportunities to make coordination more consistent for major events in the corridor.</li> <li>• Sharing data with third-parties to enhance traveler information dissemination mechanisms.</li> </ul>	<p><b>Goal 1: Collaborate to provide corridor-wide information appropriate to the location and need of the traveler.</b></p> <ul style="list-style-type: none"> <li>• Objective 1: Understand the common and unique information needs of the corridor’s diverse travelers. This includes the type of information, as well as the mechanism for delivering the information.</li> <li>• Objective 2: Provide consistent and coordinated traveler information along the entire corridor.</li> <li>• Objective 3: Provide consistent and coordinated traveler information systems and services (including leveraging third-party providers) where appropriate and technically feasible.</li> </ul>
<p><b>Focus Area 2:</b> Maintenance and Operations</p>	<ul style="list-style-type: none"> <li>• Need to share information among local and regional transportation management centers.</li> <li>• Differing perspectives on incidents and approaches to traffic management.</li> <li>• Gathering reliable, accurate and timely information on work zones (real-time and planned) throughout the corridor is challenging.</li> <li>• Need to determine the life-cycle of ITS assets to quantify the costs and benefits of deploying ITS devices in rural parts of the corridor.</li> <li>• Commercial vehicle travelers need adequate areas for rest and information on truck parking availability.</li> <li>• The learning curve and need to understand new and changing communications equipment (operations and maintenance needs) for all communication possibilities (e.g. fiber, cellular, DSRC).</li> </ul>	<p><b>Goal 2: Develop and promote cross-border jurisdictional cooperation and coordination in the deployment, operations and maintenance of ITS.</b></p> <ul style="list-style-type: none"> <li>• Objective 1: Maintain awareness and understanding of coordination tools, communication possibilities, and best practices among the North/West Passage states.</li> <li>• Objective 2: Establish and maintain shared procedures for coordinating traveler information and operations among the states.</li> <li>• Objective 3: Share lessons learned and best practices for maintaining and operating new technologies and devices</li> </ul>

Focus Area	NWP Member's Common Issues, Problems, or Needs	Goals and Objectives
<p><b>Focus Area 3:</b> Planning and Programming</p>	<ul style="list-style-type: none"> <li>• Need for improved regional coordination among the states for planning and programming ITS projects. <ul style="list-style-type: none"> <li>○ Recognizing the transition to a TSMO centric environment</li> </ul> </li> <li>• Differences in planning and funding of ITS projects among the states make it challenging for North/West Passage to advocate for corridor-oriented deployments.</li> <li>• Need to understand how the corridor will pursue competitive funding opportunities.</li> <li>• Lack of corridor-oriented performance measures.</li> </ul>	<p><b>Goal 3. Communicate and coordinate the planning and deployment of ITS projects for the North/West Passage Corridor among state, regional, and local planning and programming processes.</b></p> <ul style="list-style-type: none"> <li>• Objective 1: Develop a one to three-year list of key ITS deployments (equipment and system solutions) for the corridor.</li> <li>• Objective 2: Document and share lessons learned from integration of ITS projects and TSMO into state, regional, and local planning and programming processes.</li> </ul>
<p><b>Focus Area 4:</b> Staffing and Resources</p>	<ul style="list-style-type: none"> <li>• Understanding the changing workforce needs in member organizations. <ul style="list-style-type: none"> <li>○ Impacts of new and evolving technologies (e.g. CAV)</li> <li>○ Staff turnover, retirement etc.</li> </ul> </li> <li>• Ability to hire and retain qualified staff for today's TSMO environment within the traditional DOT structure.</li> <li>• Managing impacts of the economy on the ability to hire qualified staff (e.g. vehicle operators, equipment maintainers, incident responders, etc.).</li> <li>• Challenges with training staff on increasing systems and technology.</li> </ul>	<p><b>Goal 4. Understand the workforce needs of members.</b></p> <ul style="list-style-type: none"> <li>• Objective 1: Research and Create a list of likely impacts related to changing workforce needs (e.g. CAV, TSMO).</li> <li>• Objective 2: Exchange best practices for long-term hiring of staff with skill sets that match the evolving DOT needs.</li> <li>• Objective 3: Collaborate to address training challenges.</li> </ul>
<p><b>Focus Area 5:</b> Connected and Automated Vehicles</p>	<ul style="list-style-type: none"> <li>• Understanding the physical and digital needs of future CAVs (especially in regards to corridor operations).</li> <li>• Determining the appropriate role of State DOTs in facilitating deployment and operation of the CAV infrastructure</li> <li>• Understanding 'corridor-specific' needs such as coordination and information movement.</li> <li>• Understanding current status and trends in CAV (e.g. technologies, regulations, etc.)</li> </ul>	<p><b>Goal 5. Prepare the NWP Corridor to facilitate CAV</b></p> <ul style="list-style-type: none"> <li>• Objective 1: Understand the likely scenarios for CAV operations along the NWP corridor (possible tie with NCHRP 08-120).</li> <li>• Objective 2: Understand corridor impacts of CAV on operations of member agencies</li> <li>• Objective 3: Understand corridor needs for policies, funding, legislation, and regulations in order for member agencies to represent these corridor needs within their organizations.</li> <li>• Objective 4: Understand data needs and opportunities specific to states and corridor wide.</li> </ul>

Focus Area	NWP Member's Common Issues, Problems, or Needs	Goals and Objectives
		<ul style="list-style-type: none"> <li>Objective 5: Research, pilot, or test CAV applications based on the Goal 5 objectives.</li> </ul>
<b>Focus Area 6:</b> Freight	<ul style="list-style-type: none"> <li>Understanding of truck platooning issues, benefits, and approaches specific to corridor travel across multiple states.</li> <li>Truck parking locations and the use of public and private spaces (e.g. beyond parking information, the availability of parking is an issue).</li> <li>Evolving freight travel patterns throughout the corridor (increased sources of freight traffic, heavier loads, etc.)</li> <li>Understanding the potential benefits and impacts of emerging freight technologies (e-Clearance, CAV, etc.).</li> </ul>	<b>Goal 6. Prepare for and understand emerging freight technology efforts across multiple states.</b> <ul style="list-style-type: none"> <li>Objective 1: Coordinate a truck platooning demonstration.</li> <li>Objective 2: Document emerging freight technologies.</li> <li>Objective 3: Document the extent of truck parking needs (i.e. physical parking spaces) and identify possible solutions to reduce these needs.</li> </ul>

## **Closing**

The 2007 strategic planning process was useful for the North/West Passage program to more clearly identify the issues for the I-90/I-94 corridor that could potentially be addressed by their work. The process also clarified the program vision and established specific goals and objectives that have influenced the projects completed each year since.

This effort to assess the program's progress toward its goals in 2013 and now again in 2019 was useful for the states to reflect on their accomplishments, validate their strategic direction for the corridor and identify future areas of potential work.

Evaluating progress on a periodic basis is useful for all organizations. As such, the North/West Passage may choose to conduct a similar evaluation again in another 3-5 years, particularly in light of the ever changing transportation landscape.

The modified issues, vision, goals and objectives presented in this document will serve in conjunction with the 2007 Strategic Plan and supplemental updates and will be used by the North/West Passage program in the development of future work plans. Project ideas will be mapped to this updated document to ensure each project selected meets the visions and one or more overall goals for the program.