

## Background

In March 2013, the Whatcom Council of Governments (WCOG), as lead agency of the International Mobility and Trade Corridor Program (IMTC), was selected by the U.S. Federal Highway Administration (FHWA) to participate in a structured program focused on improving regional transportation system management and operations (TSM&O). This program, Organizing for Reliability, is funded under FHWA's Strategic Highway Research Program (SHRP2).

WCOG's proposal to the SHRP2 focused on binational, interagency collaboration in the Cascade Gateway region and, more specifically, on the border wait time (BWT) systems implemented through a decade of cooperation between Washington State, British Columbia, U.S. Customs and Border Protection (US CBP), and Canada Border Services Agency (CBSA). U.S. FHWA and Transport Canada, primary IMTC participants, were also involved in planning and funding regional BWT systems. In addition to informing travelers of current wait times, these systems help match route choice to capacity, inform agency operations and staffing, and provide robust performance and planning data.

The SHRP2 Organizing for Reliability program recognizes that even for the best technology to be effectively applied to operations of integrated facilities, there must also be well supported interagency collaboration. This program is an opportunity for IMTC agencies, including WCOG as the lead agency, to step back from our ongoing work on issues and projects and, using our shared systems operations goals, assess the ways our agencies work together, identify some changes or additional resources that would likely improve collaboration, and work with FHWA support over the next two years to create and advance an implementation plan.

## Completed actions

**October 30, 2013:** Following selection for the Organizing for Reliability initiative, the SHRP2 team from FHWA conducted an **initial face-to-face meeting** with WCOG staff and IMTC agency representatives to review background, the expected process and level of commitment, and resources available to advance program objectives.

**March 19, 2014:** The FHWA team and the consulting team facilitated a two hour senior leadership meeting. The purpose of the **senior leadership meeting** was to ensure that upper management of IMTC agencies had an opportunity to hear FHWA's intent with the Organizing for Reliability program, share their agencies' perspectives on regional operations goals and strategies, and hear counterpart senior managers' perspectives.

**March 20, 2014:** The consulting team and FHWA representatives facilitated a day-long self-assessment workshop attended by IMTC's SHRP core team for the Capability Maturity Model effort. A technical memorandum detailing the workshop is attached to this document as Appendix A.

## Results of self-assessment

The IMTC core team worked through the self-assessment, evaluating IMTC's capability maturity level (on a scale of 1 to 4) using six dimensions. The results are summarized in the table below.

## Summary of IMTC's CMM Self-assessment results

The results of the workshop are intended to inform the development of a TSM&O implementation plan. Per the Capability Maturity Model (CMM), an implementation plan should identify actions that will help advance the institutional dimensions that are currently scored at the lowest level. For the IMTC, two dimensions are targeted: for: **business process** and **performance measurement**. Some overlapping actions under the Systems and Technology and Culture dimensions will also be identified in the implementation plan.

	Level 1 Performed	Level 2 Managed	Level 3 Integrated	Level 4 Optimized
Dimensions				
Business process		●		
Systems & Technology			●	
Performance Measurement		●		
Culture			●	
Organization & Staffing			●	
Collaboration				●

## Focus of IMTC's implementation plan

As stated above, the capabilities agreed to be at the lowest level receive primary attention in the resulting implementation plan. Two dimensions, business process and performance measurement were both assessed as level two: managed. The other four dimensions scored higher and so will not be given immediate-similarly focused attention at this point. However, some overlapping, complementary actions under the Systems and Technology and Culture dimensions will be identified.-

## Implementation Plan

A first step in developing an implementation plan is to establish what the objectives are so that actions are identified based on how well they advance those objectives.

### IMTC Objectives

The IMTC coalition has a well-established and periodically reviewed and revised list of objectives. The most current version (approved in 2012) is listed below. To facilitate cross-reference in this implementation plan, the list is numbered.

**The goal of the IMTC Project is to improve safety, mobility, and security for the Cascade Gateway. To this end, the following objectives have been identified:**

- 1. Improve planning and data collection**
  - 1.1. Improve travel information and data.
  - 1.2. Promote development and management of the Cascade Gateway as a system.
  - 1.3. Determine the feasibility of rail, transit, and marine options.
  - 1.4. Monitor work completed by regional and national-level planning initiatives.
- 2. Promote infrastructure improvements**
  - 2.1. Improve border crossing approach roads.
  - 2.2. Improve rail crossings and connections.

- 2.3. Improve corridor connections of trade and travel routes.
- 2.4. Integrate Intelligent Transportation Systems (ITS).
- 3. Promote improvements to operations, policy, and border staffing**
  - 3.1. Promote coordination and improvements in accordance with the goals of federal initiatives, including the Beyond the Border Action Plan. Increase resources and staffing levels at border inspection facilities.
  - 3.2. Improve traffic management at all Cascade Gateway ports-of-entry.
  - 3.3. Ensure ongoing sustainability of the NEXUS and FAST programs.
  - 3.4. Encourage institutional collaboration and integration of information systems.
  - 3.5. Promote harmonization and consolidated administration of pre-approved travel programs including commercial travel.
  - 3.6. Explore options for binational financing structures for future improvements.
  - 3.7. Pursue shared U.S. - Canadian border inspection facilities including the creation of accord processing zones.
  - 3.8. Consider off-border inspection functions.
  - 3.9. Promote the adoption of pre-clearance for passenger rail under Canada's 1999 Pre-Clearance Act.

While the scope of IMTC's objectives is broader than traffic management and operations (inclusive of infrastructure, multi-modal strategies, financing, etc.), operations is a primary objective and clearly a good fit with TSM&O tactics.

## Plan structure

With separate sections below for the **CMM dimensions** of business process and performance measurement, the lists of identified **actions** are aimed at **CMM targets** based on the characteristics of the *next* capability level (level three) for that dimension.

**Milestones** are marked and labeled on a **timeline** over the expected two to three year implementation timeline. **Action leads** will be identified. A **cost** for associated effort will be estimated. Additional **notes** may be included about key inputs and risk factors.

## Business process (BP)

### BP target

The actions listed in this section are intended to advance IMTC planning and programming functions from the current level of being a "regionally coordinated approach to shared priorities," to an approach that is more "integrated into jurisdictions' overall multimodal transportation plans and related staged programs."

### BP actions

**BP 1.** Add IMTC as a core element of the WCOG (MPO) Unified Planning Work Program (UPWP).

**Lead:** WCOG

**Status:** Completed

**Tactics, milestones, & timeline:**

2014			2015				2016			
	✓									

**Estimated cost.** No additional cost—within existing WCOG/IMTC work program.

**Notes:** -none-

The SFY 2015 WCOG UPWP included the IMTC Program as a core function of WCOG’s work program. The document was finalized and approved by the WCOG Policy Board at its May 14 meeting.

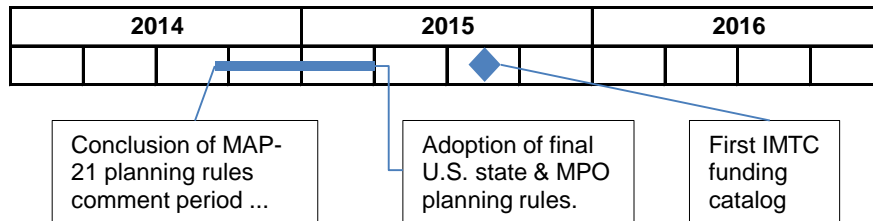
**BP 2.** Identify or establish mechanisms for the IMTC Program and IMTC identified projects to compete effectively for future funding.

**Lead:** WCOG

**Status:** Pending

**Tactics, milestones, & timeline:**

- Primary opportunities should be looked for from both the U.S. & Canadian federal governments with state and provincial partnership (as has been done in the past).
- As new U.S. Federal state and MPO planning rules are finalized and implemented, proactively adopt similar policies regarding cooperative, performance based project identification and prioritization.
- Produce and periodically update a catalog of past successful IMTC funding sources and reasonably approachable future funding sources.



**Estimated cost.** No additional cost – within existing WCOG/IMTC work program.

**Notes:** New funding strategies may be complemented by other actions identified here (below), namely the intent to better align IMTC project identification process with existing regional, state, and provincial planning and programming procedures.

**BP 3.** Explore opportunities for improved regional coordination between WSDOT, BC MoTI, and regional inspection agency management in providing inputs to U.S. FHWA and Transport Canada headquarters for their annual updates to the BtB Border Infrastructure Investment Plan (BIIP), an annually refreshed 5-year outlook of shared infrastructure investment priorities.

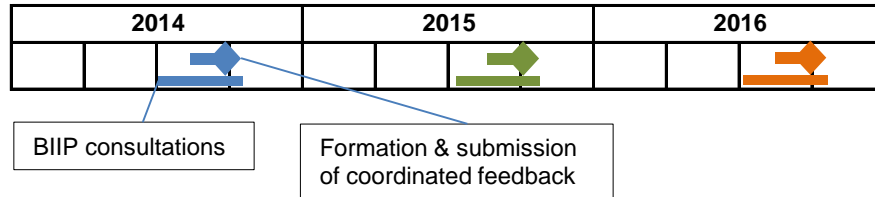
**Lead:** WCOG – with WSDOT, BC MoTI, Blaine Area CBP, Pacific Highway District CBSA

**Status:** Next step – research status of third BIIP consultative process and establish schedule for developing a coordinated feedback strategy.

**Tactics, milestones, & timeline:**

- This action should build on the IMTC’s own project identification procedures.

- Regional FHWA and TC representatives, and WCOG via the U.S.-Canada Transportation Border Working Group (TBWG) should ask HQ staff assigned to the BIIP for perspectives on how best to coordinate consultations and articulate investment priorities shared regionally and across agencies.
- Optimally, in time to be considered for inclusion in the third BIIP, IMTC will facilitate BC MoT and WSDOT’s delivery of a coordinated update to the BIIP. To the extent possible, US CBP and CBSA’s investment priorities for Cascade Gateway ports-of-entry will be included at this stage.



**Estimated cost.** No additional cost / within existing WCOG/IMTC work program.

**Notes.** There are opportunities to build on earlier system planning discussions at the WA-BC Joint Transportation Executive Committee (JTEC).

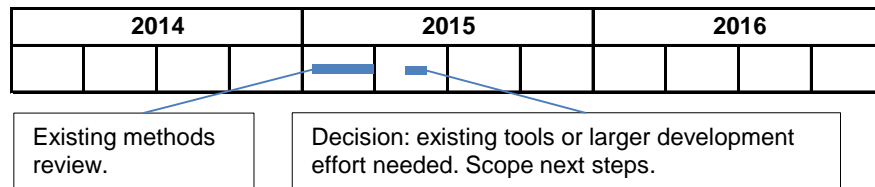
**BP 4.** Determine how IMTC could improve its ability to evaluate the economic impacts of alternative operations and/or investments, and identify methods for communicating these impacts to other agencies.

**Lead:** WCOG

**Status:** Not started.

**Tactics, milestones, & timeline:**

- With IMTC agencies and entities, review any methods and tools currently used estimate economic impacts and develop business-cases. This review should note any differences in methods, standard inputs, policy-based assumptions, etc.
- Decide if adequate and compatible methods exist that can be adopted by IMTC or if a higher level of effort is required (and still desired) to advance IMTC’s capability in this area.
- Based on conclusions from above, define next steps and, possibly, estimate the need for project funding.



**Estimated cost:** New work task for initial research. Preferred option could require dedication of resources and acquisition of software, etc.

**Notes:** There have been discussions in the past with other agencies who have also been interested in regional economic models set up for inputs and outputs in a cross-border geography.

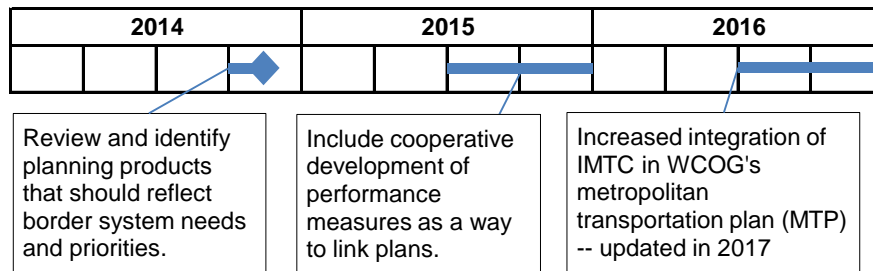
**BP 5.** Identify and pursue methods to ensure that IMTC projects and priorities are included in statewide [and provincial] plans (STIP, multimodal plan, rail plan, freight plan, etc.).

**Lead:** WCOG

**Status:** Underway

**Tactics, milestones, & timeline:**

- Build on the inclusion of IMTC as a core function in WCOG’s 2015 UPWP.
- List existing plans that make the most sense for covering cross-border operations and investment.
- As this action is pursued, document analogous linkages to project identification and prioritization in British Columbia and with regard to Canadian federal transportation investment planning and decision making.
- More fully integrate IMTC into WCOG’s next metropolitan transportation plan (MTP).
- As development of performance is coordinated with the state, strive to involve other partners in development and adoption of these system management tools (province, U.S. and Canadian federal border agencies).



**Estimated cost:** No additional cost / within existing WCOG/IMTC work program.

**Notes:**

## Performance measurement (PM)

### PM target

The actions listed in this section are aimed at advancing IMTC agencies’ collective capabilities in the area of performance measurement – how entities collect data and create and use information to improve system management. The CMM self-assessment identified IMTC’s current capability level on this dimension as level 2 (managed). Level-2 capability is characterized by the availability of data from various IT systems (ex. border wait-time systems, trade and travel surveys, agency statistics, etc.) and IMTC agencies’ warehousing and availing of archived data via the CascadeGatewayData.com interface. Progressing to level 3 will be characterized by IMTC agencies identifying and associating outcome measures with objectives and using those measures to inform identification of improvement projects and actions.

**PM 1.** Establish and document a repeatable method for exchanging data between transportation and inspection agencies to validate border wait times. Recognize and emphasize that the focus is on system accuracy, not the wait times themselves.

**Lead:** WCOG

**Status:** Underway

**Tactics, milestones, & timeline:**

- Incorporate this undertaking with the Dynamic Border Management initiative recently funded with FHWA Research funds.
- Build on a successful advanced traveler information system (ATIS) validation pilot project between WSDOT and CBSA at the Pacific Highway port of entry.
- Document intended methodology before next effort and follow up with lessons learned and refinements.
- Evaluate feasibility of the preferred method for both directions of traffic (BC highway to CBP port & WA highway to CBSA port).
- Conduct next effort with the intention of it being repeatable and adopted as part of an ongoing system validation program.

**Estimated cost:** This effort will be conducted as part of the Dynamic Border Management project funded by FHWA and BC MoTI.

**Notes:**

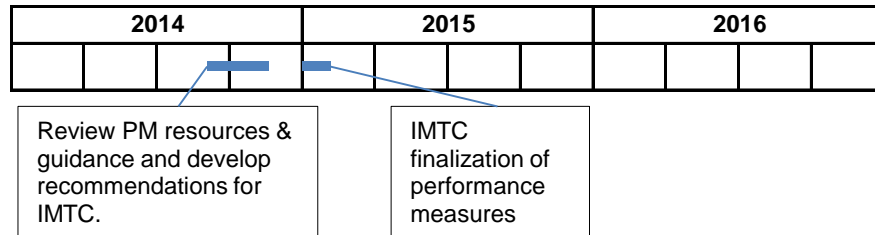
**PM 2.** IMTC will collaboratively develop an appropriate set of border-related performance measures as well as measures of IMTC’s performance as a cross-border planning coalition.

**Lead:** WCOG

**Status:** Underway

**Tactics, milestones, & timeline:**

- WCOG staff will review current literature, FHWA guidance, and take advantage of other FHWA resources (ex. training or workshops) via the SHRP2 program to develop initial recommendations for IMTC consideration.
- To the extent possible and appropriate, align the selection of performance measures with metrics identified in the U.S.-Canada Beyond the Border Action Plan (BtB)



**Estimated cost:** This effort is within the scope of WCOG’s ongoing work with IMTC but represents a new set of tasks.

**Notes:** This effort will likely be complemented by a national emphasis for metropolitan planning organizations (MPOs) in the U.S. to shift to performance based management.

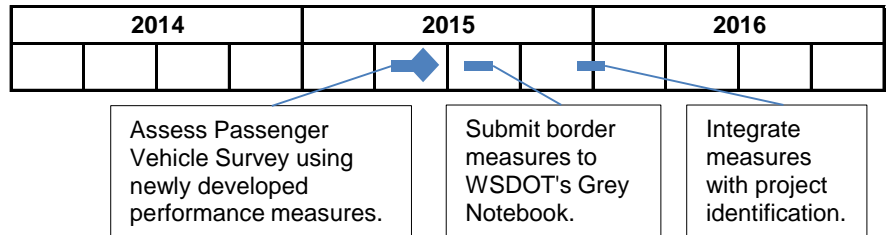
**PM 3.** Use adopted performance measures to conduct before-and-after analyses of completed projects.

**Lead:** WCOG

**Status:** Will begin following completion of PM 2.

**Tactics, milestones, & timeline:**

- With measures identified through completion of PM 2, assess the value of the 2013/14 Passenger Vehicle Survey.
- Submit measures of border performance to the WSDOT Grey Notebook.
- Include established performance measures in proposals and business cases for identification and prioritization of future projects supported by the IMTC coalition.



**Notes:**

## Systems and Technology (S&T)

### S&T target

The actions listed in this section are intended to advance IMTC planning and programming functions from the current level of 2.5; between *managed* and *integrated* - "Systems and technology are standardized and integrated on a regional basis with other related processes and training as appropriate."

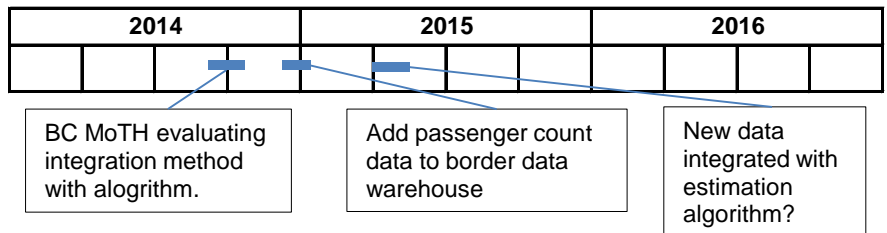
### S&T actions

**S&T 1.** Monitor the integration of newly available vehicle processing data from U.S. Customs border inspection booth systems with the BC Ministry of Transportation and Highways' border wait time measurement system.

**Lead:** WCOG

**Status:** Underway

**Tactics, milestones, & timeline:**



**Estimated cost.** TBD, for setting up the data connection between the data warehouse and CBP's data-access URL, a new data table, and query tool.

**Notes:** -none-

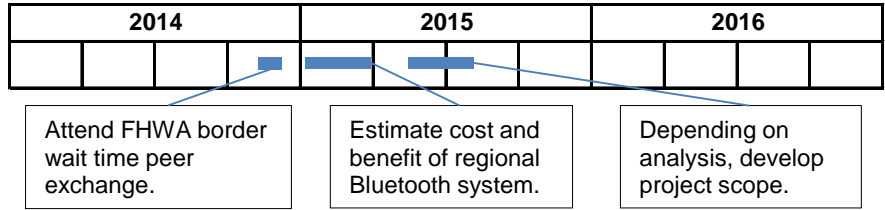


**S&T 2.** Evaluate the installation of Bluetooth readers as a parallel border wait time measurement system for use as an additional input (estimate of *actual* wait time vs. *current* wait time) and an ongoing source of comparison/validation.

**Lead:** WCOG

**Status:** Recently identified as a desired alternative.

**Tactics, milestones, & timeline:**



**Estimated cost.** TBD.

**Notes:** Could likely be deployed in phases. Next step would be to integrate with the Performance Measurement CMM dimension.

## Culture (C)

### C target

The action listed in this section is intended to help advance IMTC planning and programming functions from the current level of 2.5; between *managed* and *integrated* to fully integrated - wherein the organizational mission "identifies TSM&O and benefits with formal program and achieves wide public visibility and understanding."

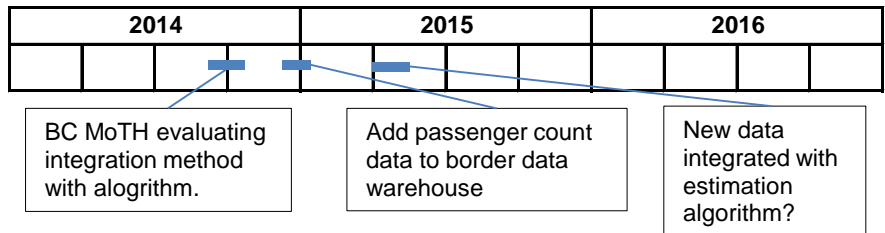
### C actions

**C 1.** In the context of upcoming, continued regional promotion of the NEXUS trusted traveler program, WCOG, in partnership with IMTC participating agencies, will seek opportunities to raise public awareness of IMTC agencies' TSM&O accomplishments (including regional support of the NEXUS program and border wait time systems) and, in a broader sense, the .

**Lead:** WCOG

**Status:** Underway

**Tactics, milestones, & timeline:**



**Estimated cost.** TBD, for setting up the data connection between the data warehouse and CBP's data-access URL, a new data table, and query tool.

**Notes:** -none-