# NCHRP Project 03-131: Planning and Implementing Multimodal, Integrated Corridor Management: Fact Sheet

Many jurisdictions have implemented a variety of strategies for maximizing flow on facilities by using all available pavement, transportation services, and managing their facilities using new technologies and better operations techniques. Most recognize the importance of managing their systems through inter-jurisdictional coordination with emergency responders, incident response, transit, mobility services, and maintenance and construction management as well as timely notification to the public. Monitoring traffic operations through use of transportation management centers (TMCs) with reliable detection and surveillance and with available strategies to deploy such as incident response is an active engagement in the reduction of recurring and non-recurring congestion. Pulling this all together through Integrated Corridor Management (ICM) is essential to successful transportation system management. However, actively integrating the separate strategies such as transit re-routing, mobility on-demand services, multi-modal trip making, arterial coordination, detour planning, lane management in real time requires planning and coordination among many stakeholders.

## **IntegratED Corridor Management**

Integrated corridor management (ICM) takes an integrated, multimodal/multiagency approach to congestion management. Rather than address the shortcomings of the separate roadways and modes in isolation, ICM treats the individual transportation components (highways and roads, transit, parking lots, bicycle and pedestrian trails, etc.) as elements of an interrelated transportation corridor. ICM uses technology and operational strategies as tools for transportation operators to address recurring and non-recurring congestion and optimizes performance of the transportation infrastructure. ICM promotes interjurisdictional coordination and the use of a broad toolbox of transportation system management and operations (TSMO) strategies to optimally detect, monitor, and respond to events and changing conditions. General benefits of ICM include improved mobility, reliability, and safety, and reductions in fuel consumption and fuel emissions.

## **Reasons to Consider ICM**

Currently, many agencies operate their transportation networks well, but do not consider the overall operation of a corridor or region to improve the throughput of travelers through the corridor. ICM focuses on the operational, institutional, and technical coordination of multiple transportation networks and cross-network connections comprising a corridor. Moreover, ICM can encompass several activities which address the problems and needs of agencies in a region (e.g., integrated policy among stakeholders, communications among network operators and stakeholders, improving the efficiency of cross-network junctions and interfaces, real-time traffic and transit monitoring, real-time information distribution, congestion management, incident management, public awareness programs, and transportation pricing and payment).

According to USDOT, “The vision of Integrated Corridor Management (ICM) is that transportation networks will realize significant improvements in the efficient movement of people and goods through institutional collaboration and aggressive, proactive integration of existing infrastructure along major corridors. Through an ICM approach, transportation professionals manage the corridor as a multimodal system and make operational decisions for the benefit of the corridor.”

## **Guidebook**

The objective of this research was to develop guidance for agencies planning and implementing multimodal, integrated corridor (or area) management. The guidebook features multiple real-world examples drawn from a variety of contexts and an appropriate range of agency capabilities. The following sections provide an overview of the guidance document.

## **Pre-Assessment of ICM**

Regions considering ICM should perform pre-planning, foundational activities that will set the stage for the ICM planning process. These activities offer a set of optional, up-front steps that practitioners can step through to (1) quickly determine whether ICM is a potential reasonable solution to their circumstances, and (2) sketch out the general contours of a prospective ICM project. It allows for initial pre-assessment before extensive time and resources are invested in more comprehensive ICM planning. This multi-step process includes:

1. Broadly Identify the Project Corridor
2. ICM Reality Check: Determine Whether ICM is a Candidate Solution for the Corridor
3. Identify Regional Partners and Stakeholders
4. Begin Profiling the Project Corridor
5. Conduct a Preliminary Maturity Assessment for the Corridor
6. Determine Whether to Move Forward with the ICM Project

## **Planning for ICM**

The objectives of the Planning and Concept Phase are to coordinate across project partners and stakeholders and gather information necessary to define the desired ICM capabilities, corridor resources and available corridor data to help inform the corridor boundaries and project needs assessment. This in turn helps project stakeholders to gain a clear understanding of where ICM may be beneficial so that they can define the high-level ICM project goals and objectives. The four primary products from this phase are the:

1. Project Management Plan;
2. Systems Engineering Management Plan;
3. Concept of Operations and the Analysis Plan; and
4. Preliminary feasibility assessment of the proposed ICM system (ICMS).

These documents are crucial for organizing the management and the technical programming approach to ICM in a region and implementing an ICMS.

Tasks in this planning phase (which are not sequential) include:

* Identify & Diagnose Problem
* Establish ICM Objectives & Scale
* Determine Potential Partners
* Engage Potential Partners
* Assess Potential Partners’ Needs
* Develop ICM Concept of Operations
* Designate Performance Metrics
* Assess Benefits of the Planned ICM Deployment
* Initiate Formal Agreements
* Develop Plan for Implementation