INTEGRATED CORRIDOR MANAGEMENT (ICM)

TEN ATTRIBUTES OF A SUCCESSFUL ICM SITE

MOBILITY

ICM "Readiness"

- Recognizing existing infrastructure and systems for each modal network and identifying whether these can be effectively integrated into ICM
- Distinguishing whether existing transportation systems are being fully optimized
- Knowing whether the corridor contains alternative routes and modes for travelers
- Verifying that relevant agencies are in support of corridor operations

In 2013, the U.S. DOT selected two corridors – U.S. 75 in Dallas, TX and I-15 in San Diego, CA to demonstrate the nation's first ICM systems. Subsequently, thirteen more sites were awarded grants to conduct pre-implementation. Those additional sites are located in Austin, Texas; El Paso, Texas; Pasadena, California; Contra Costa County, California; Portland, Oregon; Salt Lake City, Utah; Broward County, Florida; New York City, New York; Maricopa County, Arizona; Baltimore-Washington region; Northern Virginia East-West Corridor; Buffalo-Niagara region; and New Jersey. Through the ICM initiative, the U.S. DOT is providing guidance to assist agencies in implementing ICM and creating supporting analysis, tools, and approaches, and is gleaning lessons learned.

Photo Source: USDOT

U.S. 75 corridor in Dallas, Texas.

ICM attempts to help manage and control congestion on freeways and arterials by utilizing multimodal communication between transportation organizations and agencies. ICM can improve travel-time reliability and alleviate congestion by providing drivers and motorists multimodal traffic information to enable the most efficient and fastest means of transportation.

Prospective areas considering ICM must ensure that they are properly prepared to address implementation challenges. Dedicated coordination with local agencies and organizations is necessary to ensure that even the smallest details are not overlooked. For example, one agency upgrading software on a system may seem minute, but this can cause malfunctions in the system flow for partner agencies. These tasks are small but crucial in guaranteeing implementation success. In addition, communication and coordination between partner agencies is critical to ensure efficient operation of the system.

This fact sheet presents ten attributes of successful ICM sites and describes their importance for effective implementation.

"In order to keep the economy moving, you have to keep mobility – keep goods, people, and services – moving. When the option was no longer there to physically expand our roadways, we had to turn to technology and ICM was the logical choice."

Randy Iwasaki
Executive Director, Contra Costa, Transportation Authority

"Caltrans is dedicated to the ICM project because it is critical to enhancing the livability of I-15 commuters. The project's success is due to collaborative, strategic partnerships of local, regional, and state agencies working in concert towards the common goal of providing network efficiency and reliability."

Cory Binns, PE
Chief Deputy District Director, Caltrans District 11

INTEGRATED CORRIDOR MANAGEMENT (ICM)

TEN ATTRIBUTES OF A SUCCESSFUL ICM SITE

1. Significant Congestion and Unreliable Travel Times

The most critical—and obvious—attributes of a successful ICM site are noticeably high congestion and unreliable travel times. The impact of ICM is more noticeable in areas with significant congestion and delay, as improved traffic flow in these areas can be more attributable to ICM strategy implementation than in areas that experience inconsistent congestion.

2. Institutional Support

One of the most critical pieces of successfully implementing ICM is interagency and institutional support. Without the coordination of transportation agencies and organizations, multimodal communication and coordination is extremely difficult. Deployment of the required ICM technologies can be severely delayed or even immobilized without the support of local and regional transit agencies and the ability to send information across jurisdictions. Strong leadership is also important. ICM implementation not only requires the coordination and support of external agencies and organizations, it also relies heavily on the ability to coordinate and make decisions from an internal perspective. Like most systems, ICM implementation can only fully succeed when all parties involved work together, and a strong sense of leadership is necessary to keep all of those aspects organized and the end goal on track.

3. Infrastructural Availabilities

ICM sites must also have the appropriate infrastructure in place to support ICM, such as parallel arterials and additional transit options. For ICM to work properly, there must be alternative means of transit to which people can shift based on the information and traffic data the system provides.

4. Multimodal Capabilities

ICM corridors must also have the ability to connect in a multimodal fashion. This means that the different transit organizations and agencies must be able to communicate with one another, such as bus transit, rail transit, high-occupancy- vehicle (HOV) lane management, etc. Full implementation is nearly impossible without open communication—both technologically and organizationally—between the different modes of transportation.

5. Centralized Data Hub

A localized transportation management center is critical for housing all communication and traffic data in one centralized location. This makes it easier to organize and analyze the different traffic data and information in a consolidated manner.

6. Successful Procurement Practices

The most successful ICM sites are able to identify the processes and practices that work, and the personnel needed to perform the job correctly and proficiently. For example, integrating traffic systems together requires a different set of skills and expertise than typical traffic engineering. Intelligent transportation systems (ITS) experts may need to be involved in the integration process to ensure it is completed effectively, and knowing this information in advance eliminates wasted time spent on troubleshooting. Efficient ICM sites are fully aware of expertise requirements and act accordingly during the procurement and integration processes.

7. Readily Available Alternative Transit Options

Alternative transit options are a necessity for successful ICM sites. These options could include bus rapid transit, HOV lanes, alternative commuter options, commuter rail, heavy rail (e.g., subway), and light rail. Effective ICM sites already have these options in place before ICM is implemented, and therefore can more easily integrate the options together.

8. Optimization of Existing Transportation Systems

Successful ICM sites are able to determine whether the currently existing transportation systems are being fully optimized to ensure that there are no additional underlying problems with traffic networks. For example, a site must verify that roads cannot be widened any more due to surrounding infrastructure or physical location, or validate that all additional alternative routes are being utilized in a manner that cannot otherwise be improved upon without ICM.

9. Public Engagements

Keeping stakeholders and the public engaged provides the public with better understanding of expected changes and better enables them to make more informed travel choices. A dedicated public-facing website that houses all of the corridor information and serves as a one-stop shop for project information can keep the public knowledgeable of recent ICM developments. It also provides the media access to all images and videos and reminds the public that the system is still in place—even after all physical changes and construction have been installed and forgotten.

10. Open-mindedness for Change

Change is not always easy. While some people are more susceptible to change, others may see it as a threat to the familiar routine and be less receptive. Successful ICM sites are able to encourage an open mind and acceptance to changing solutions for congestion and traffic. Encouraging the public to support the changes for the betterment of congestion and travel times is an extremely important—and sometimes difficult—task.

Additional information at: https://ops.fhwa.dot.gov/program_areas/corridor_traffic_mgmt.htm

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FHWA-JPO-18-710