Migration Strategy – Getting From Where You Are to Where You Want to Be

Adopting or refining a set of congestion measurements should be done in a context that recognizes a number of factors. The transition to a different set of performance measures, likewise, requires consideration of the data requirements, measurement and estimation methodologies and the uses and users of the measurement information. These changes take time. The changes also will not occur in the same rate or follow the same path in every state or metropolitan region.

After an agreement on measure definitions, time and geographic specifications, targets and calculation basics, each state will consider improvements and changes to current procedures. The elements in Exhibit 1 illustrate one approach to incorporating new procedures and data for congestion measurement programs.

Exhibit 1. Summary of Example Strategy

Topic	Migration During The Next Few Years (Each Period Builds on the Activity in the Preceding Period)		
	Current	**Mid-Term**	**Longer-Term**
Data Collection	Roadway inventory and traffic counts	Limited use of traffic monitoring data for spot speeds and volume	Travel speed data for each road section
Performance Measures	Level-of-service Volume/Capacity ratios Density	Travel time and speed estimates	Travel time and speed Reliability
Area	State and corridor operations and performance	Bottleneck studies to identify network constraints	Comprehensive & continuous study of congestion
Time	Peak and off-peak analyses	Weekend analyses	Real-time 24/7 data collection and analysis
Use in project prioritization	None	Include congestion as a factor in selecting projects	Comprehensive use of congestion data in project priorities and evaluation
Use for operations	Display real-time data on website; use data in real-time to improve operations	Use real-time data to improve estimation models	Save real-time data in archive and use for planning and evaluation
Modes & Systems	Major roads	All roads	Public transportation systems

<u>The Vision</u>

The general concept behind the migration approach is to move toward a broader and more consistent use of congestion measures and data. All states begin this path from different points

and, due to a variety of agency responsibilities and legislature mandates, they will all end in different practices and structures. Given this, there is no single "cookie-cutter" set of congestion performance measures. But there can be a consistent set of definitions and concepts that can be sued with the selected performance measures. The ideal congestion measure for any combination of requirements will include the features listed below. These issues should be examined before data are collected, reporting mechanisms are designed or the analysis begins. The "end" of the process will have a number of the following attributes:

- Connected to visions and goals of the agency and the public – The congestion measures and target levels must relate to the transportation and land use goals that both the public and the agency have set.
- Targets – There will be some variations in the target conditions between the modes, but the goal will be to identify target values that represent comparable conditions.
- Clearly communicate results to audiences – While the technical calculation of mobility information may require complicated computer models or estimation techniques, the resulting information should be in terms the audience can understand and find relevant.
- Include urban travel modes – Mobility is often a function of more than one travel mode or system. At least some of the measures should contain information that can be calculated for each element of the transportation system. Non-motorized modes can also be evaluated with similar performance measures. The ability to analyze the system, as well as individual elements, is useful in the selection of alternatives.
- Have consistency and accuracy – Similar levels of mobility, as perceived by travelers, should have similar mobility measures. This is important for analytical precision and also to maintain the perception of relevancy with the audiences. The results from relatively simple procedures should be similar to those obtained from complex models. The calculation methods can also be checked by comparing expected results to field measurements after an improvement.
- Illustrate the effect of improvements – The effect of the projects and programs that may be enacted should be illustrated by the measures that are used.
- Be applicable to existing and future conditions – Examining the need for improvements to current operations as well as the effect (e.g., before-after analyses) is a typical use of mobility measures that can be satisfied with several different data collection and analysis techniques.
- Be applicable at several geographic levels – A set of mobility measures should include statistics that can illustrate conditions for a range of situations, from individual travelers or locations to sub-regional and regional levels.
- Use person- and goods-movement terms – A set of measures should include factors with units relating to the movement of people and freight. In the simplest terms, this means using units such as persons and tons. More complex assessments of benefit value will also examine the different travel patterns of personal travel, freight shipping, commodity value, manufacturing effects and intermodal connections.
- Use cost-effective methods to collect and/or estimate data – Readily available data or data collected for other purposes is a method of maximizing the usefulness of any data collection activities. Real-time travel speed, person volume and freight travel data originally collected for traveler information purposes can be used for project selection and prioritization, corridor evaluation and reporting.