

**Transportation System
Management & Operation
Mega Issue
Overview**

November 11, 2005

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Introduction

Transportation System Management and Operation (TSMO) is not a new concept. ITE documents show that many of these activities now associated with TSMO were part and parcel of the definition of traffic engineering when the Institute was founded in 1930. The traffic engineering profession has a long history of accomplishment and yet has rarely had the respect and prominence of those who design and build roads. Similarly, investment in TSMO lags other types of transportation investment in spite of the fact that many operational improvements are highly cost effective.

Transportation System Management and Operation has long been a top priority for members of the Institute of Transportation Engineers (ITE). It is not a surprise, therefore, that TSMO emerged as one of the top “mega issues” for the Institute. As a mega issue, the topic of TSMO was brought to ITE’s International Board of Direction (IBOD) for in-depth discussion. The intent of the discussion was to identify the **priority roles** that ITE should play and the **specific areas** of TSMO that are most significant for ITE members and the association. The IBOD discussion was based on a white paper developed by ITE’s M&O/ITS Council and staff.

There are many dimensions to transportation system management and operation and multiple roles that ITE can play. However, the IBOD recognized that it is not feasible for ITE as an association to be a leader in all areas at once. The deliberations of the IBOD were intended to focus ITE’s energies in the areas with the highest benefit to ITE members and where ITE contributions and leadership would be most worthwhile. Subject areas and roles that did not rise to the highest priority remain important to ITE and will be pursued as opportunities arise; however, the high priority areas are those where ITE will make a concerted effort to play a major role within the transportation community.

Results

The following is a synthesis of the main points and priorities distilled from the IBOD deliberations. The IBOD discussion on transportation system management and operation focused on identifying the technical, policy and enabling issues that are most suited to ITE leadership and of interest to ITE members. During the discussion of issues, ITE Board members noted roles that ITE should play. Due to time constraints, the discussion of ITE roles was not completed. This summary combines the comments from the IBOD with the thoughts from the M&O/ITS Council to develop proposed roles for ITE.

Themes from the IBOD discussion:

- ❑ ITE should serve a key **provider** role for **professional development** in TSMO. This role links well with ITE’s other mega issue on professional development. As a provider, ITE will provide technical content through a variety of professional development venues such as web seminars, web briefings, on-line learning, seminars, etc.
- ❑ ITE should position itself to be a conduit for **local government representation** in TSMO. This may require organizational change and/or realignment of the Public Agency Council or development of a forum for this purpose.
- ❑ ITE should be a **provider** for **traffic signals**, including **arterial management** and **corridor management**. This is a core area for ITE that should remain so and continue to grow. The IBOD also supported ITE’s **advocate** role for traffic signal operations.
- ❑ ITE should be a leader in **performance measures**. The IBOD recognized that this is a growing area that has the potential for far reaching impacts within the profession

- ❑ Because of ITE’s multi-agency members, the IBOD affirmed ITE’s unique position to lead in **regionalism**. ITE can effectively serve many roles, particularly as a **convener** to promote collaboration among parties.
- ❑ The IBOD noted ITE’s unique position through it’s multi-disciplinary members to serve as a link between operators and transportation planners. Therefore, incorporating operations into transportation **planning** was a clear priority for focus.
- ❑ IBOD discussion also focused on **collaboration** between agencies and the important role that ITE can play due to its extensive and diverse members. This is reflected in ITE’s **advocacy** role and **convener** roles throughout TSMO and particularly in regionalism and planning for operations.
- ❑ ITE should continue its leadership position with the **National Transportation Operations Coalition (NTOC)**.
- ❑ ITE should continue to monitor developments in low priority areas, particularly vehicle infrastructure integration, road weather management and freight/curbside delivery. These areas have potential for substantial interest from ITE members.

As mentioned previously, many other aspects of transportation system management and operations were discussed. The above items constitute the “headlines” from the IBOD discussion. The table below organizes the key topics, the ITE role and the relative priorities. The intent is to maintain a high degree of attention on activities and projects (either volunteer or contractual) in the high priority areas particularly for the near-term. Other areas will be pursued as opportunities arise and as time and resources permit. These other areas may be focus areas in future years.

Management & Operations Area	Priority	Provider	Convener	Advocate	Partner	Clearinghouse
M&O Professional Development	H	X				X
Local Government Role	H	X	X	X		
Performance Measures	H	X				
Traffic signals	H	X		X		X
Arterial Management	H	X		X		X
Corridor Management	H			X	X	X
Planning	H	X	X	X	X	
Regionalism	H	X	X	X	X	
Traffic incident management	M	X			X	
Managed Lanes	M	X			X	
Investment Analysis	M			X	X	
Business Case	M			X	X	
Emergency/Special Event Management	M	X		X		
Organizational Change	L			X		
Freeway Management	L				X	
Work Zones	L	X				
Vehicle Infrastructure Integration	L			X	X	
Road Weather Management	L			X	X	
Freight/Curbside Delivery	L	X				
511	L	X				