

# Transportation Operations



**Applied Research Associates (ARA)** is an employee-owned international research and engineering company recognized for providing technically excellent solutions to complex and challenging problems. In the transportation community, this focus translates into providing innovative technologies and services in the areas of transportation operations, safety, connected and automated vehicles, traffic monitoring, and transportation asset management. We take great pride in helping agencies optimize planning decisions, enhance designs, administer high-quality construction projects, and implement cost effective maintenance programs.

Our mission is to provide technologies and services that enhance each of the key stages of the highway's lifecycle from planning processes through operations functions. We focus on advancing holistic **Transportation Systems Management and Operations (TSMO)** readiness and processes at agencies. We combine decades of research and consulting experience with broad subject matter expertise to partner with our clients to advance transportation operations and safety programs.



For more information on ARA's transportation operations and safety capabilities, please visit [www.ara.com](http://www.ara.com)



**Transportation Operations** leverage technologies and partnerships to optimize the safety, reliability, and efficiency of the transportation network. They encompass both operational management strategies, such as traffic incident management and integrated corridor management programs, and the technologies and applications that support operations, like Intelligent Transportation Systems (ITS) devices, detection and communication technologies, data collection and usage, traffic signals, and the full array of traffic management center (TMC) activities. Operations support more traditional activities and resources in infrastructure projects, roadway signage, communications networks (fiber and wireless), commercial vehicle operations and weigh stations, and other advanced operations techniques.

**Transportation Systems Management and Operations (TSMO)** allows for a strategic approach to optimize safety and operations of multimodal transportation assets, infrastructure, and services by focusing on proactively assessing performance through improved management of existing services, situational awareness, data, and safety measures. At the agency-level, a focus on TSMO involves implementing and integrating specific activities, strategies, systems, technologies, data, and collaborations across modes and jurisdictions to optimize the network.

ARA practitioners work with our clients to institutionalize TSMO principles throughout agencies by connecting the disparate technology applications and management processes into cohesive and coordinated programs and by developing strategic plans to advance TSMO readiness. We work to improve a TSMO mindset across agencies by developing approaches to emerging technology deployments, implementation programs, communication strategies, and by crafting detailed action plans that address the future needs of the transportation system and supporting programs.

ARA provides comprehensive transportation planning, research, and consulting services for advancing operations and safety programs for local, state, and federal agencies. We support:

- **TSMO Program and Strategic Planning**
- **Capability Maturity Model (CMM) Self-assessments**
- **Bilateral Infrastructure Law (BIL) Grant Support**
- **TSMO Business Case Support**
- **TSMO Service Layer Development**
- **Connected and Automated Vehicle Policy, Planning, and Deployments**
- **Emerging Technology Research and Deployments**
- **Freight Operations**



Through the systematic use of management strategies, engineering and economic analysis, communication processes, and other tools and resources, ARA helps transportation agencies advance the safety, reliability, and efficiency of their transportation system.