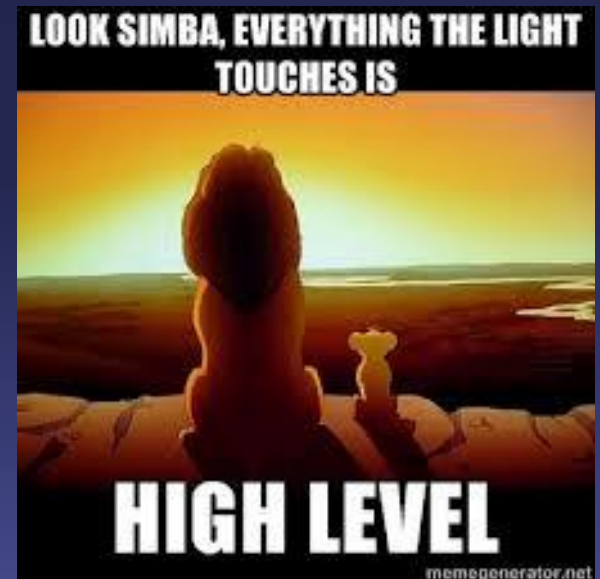


Impacts of Technology Advancements on TMC Operations

U.S. Department of Transportation
Federal Highway Administration
January 2013

Overall Principals

- Communication
- Coordination
- Cooperation



Eight TMC Operations Top Trends

Emerging from Within the Transportation Community



A Nimble Service-Oriented Program Mindset and Organizational Structure



Active Transportation and Demand Management (ATDM) Concept and Toolkit



Accommodating Toll and Other Pricing Operations in TMCs



Performance Monitoring and Management

Trends and Technologies that TMCs Can Adapt and Take Advantage of from Outside the Transportation Community



Automation Tools and Related Tools to Increase Efficiency



Involvement of Third Parties in Data Collection, Data Analysis, and Provision of Traveler Information



Mobile Communications and Wireless Networks

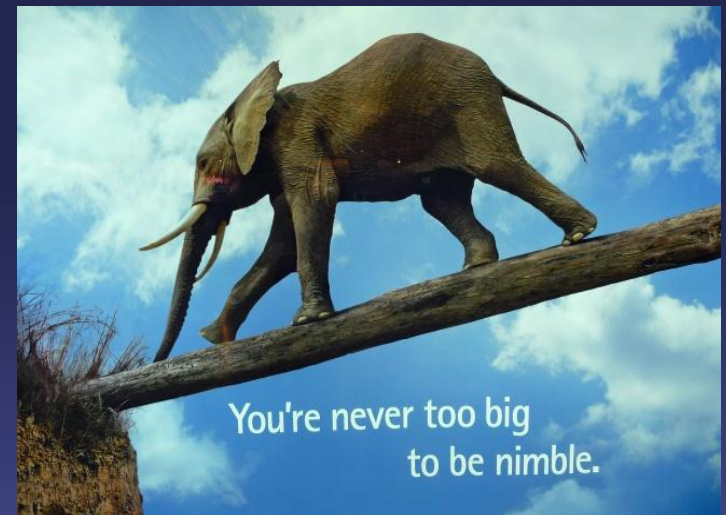


Social Media for Traveler Information and Crowdsourcing

Nimble Service-Oriented Program Mindset and Organizational Structure

Represents the framework of being positioned to successfully select and rapidly adopt changing technologies and processes.

- Foster and agency culture of embracing technology change
- Create training program
- Promote a culture of open communication
- Adopt standards on equipment and processes
- Use open-source or non-proprietary when possible



Active Transportation and Demand Management (ATDM) Concept

Using a variety of tools at one's disposal to proactively make operations more efficient, including through staff and technology.

- Implement a suite of emerging transportation concepts, coordinating as necessary
- Active Traffic Management (lane control, variable speed limits, hard shoulder)
- Real time transit, parking, traffic info
- Ramp metering, signal timing
- Road weather integration
- Opportunities to share resources (communications networks, cameras)

Accommodating Toll and other Pricing Operations

Integrating pricing in operations encourages obtaining revenue through tolling and financing infrastructure expansion.

- Develop protocols for operations
 - Pricing
 - Incident management
- Start early in feasibility planning



Performance Monitoring and Management

Increasing data collection and analysis can lead to improved operations, enhanced customer service and documented effectiveness.

- Use results of performance monitoring related to agency goals to support funding requests
- Performance measures to support staff performance, fulfilling agency goals
- Outputs vs. Outcomes



Automation Tools and Related Tools to Increase Efficiency

New technologies that improve system management and cost-effectiveness thus resulting in greater productivity.

- Increase operator efficiency
- Develop decision support systems
- Specify automation
- Predictive analysis and forecasting anticipating congestion
- Consolidate across agencies



Involvement of Third Parties in Data and Traveler Information

Utilizing data services that third-party vendors provide to manage roadway traffic and deliver traveler information to the public.

- Develop pre-qualifications or standards regarding data accuracy and validation (data received and sent)
- Provide real-time data to third party app developers
- Share data among agencies



Mobile Communications and Wireless Networks



Advances in wireless technology provide options when it comes to modernizing field equipment and increasing data coverage.

- Coordinate with IT staff to develop firewalls and other security protocols that are effective without limiting functionality.
- Efficiently expand field device coverage and operations cost using wireless
- Allow appropriate remote access with partner agencies

Social Media for Traveler Information and Crowd Sourcing

Using social networking tools to receive and distribute information among agencies, travelers, and third parties.

- Develop procedures and protocols for use of social media.
- Foster relationships among public relations groups
- Partner with private sector to facilitate social media outlets and realize cost efficiencies



Questions



Full Report @

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