

The Future of TDM

History can help us understand the present, and predict the future!

Jon Martz
Director, Government Sales

February 9, 2017

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Historically, TDM was a response to crisis

OPEC Oil Embargo (1973) and Oil Crisis (1979)

Public Sector response

- 55 mph speed limits on public highways
- Highway funds allowed for ridesharing demo programs
 - (In 1978, this allowance was made permanent.)
- Metropolitan ridesharing encouragement initiatives
 - FHWA Carpool Matching Program (Cobol)
 - Carpool information roadway signs
 - Public service announcements, e.g. Kalaka carpool
- Creation of HOV Lanes (e.g. Shirley Hwy in NoVA)

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Private Sector response

- Creation of employer vanpooling (Bob Owens of 3M, Bill Fortune of Conoco)
- National Task Force on Ridesharing (Carter, 1979)
 - Asked large private employers to get involved
 - By 1981, ~24,000 corporate-owned vanpools for their commuting employees
 - National Association of Van Pool Operators (NAVPO) – *Forerunner of ACT*
- Three Types of Vanpooling
 - Employer-owned/-operated (Today, few programs remain.)
 - Owner-operators (Remain in one market with significant public assistance)
 - Third-Party Vanpooling
 - Today, 12K of 17.5K (est.) by private providers of public transportation by vanpool

Next, TDM was a response to air pollution

Clean Air Act Amendments (1990)

- Provisions for Attainment/Maintenance of National Ambient Air Quality Standards
 - Non-Attainment Categories: Moderate, Serious and Severe
- California Regulation XV
 - Required TDM-trained Employee Transportation Coordinators (ETCs)
- WA Commute Trip Reduction Act (1991), CTR Efficiency Act (2006), State Agency CTR (2009)

Intermodal Surface Transportation Efficiency Act (ISTEA, 1991)

- Newly-authorized Congestion Mitigation and Air Quality Improvement (CMAQ) Program
- Through FY15, CMAQ program provided \$30 billion to fund 30,000+ transportation-related environmental projects for State DOTs, metropolitan planning organizations, and other sponsors throughout the US.

Today, the primary TDM strategies include riding the bus or train, HOV/HOT lanes, vanpooling, carpooling, carsharing, bicycling, bikesharing, walking, compressed work weeks or teleworking... and the many ways to incentivize the expansion of their use!

Public Policy OPPORTUNITIES for TDM

DOT's Final Rule on Performance Metrics re: CMAQ and System Performance

- Focus on “per-Person Through-put” (PPT) rather than “Vehicle Through-put”
 - “Annual Hours of Peak-Hour Excessive Delay Per Capita” (PHED)
 - New measure to assess modal share, specifically the percent of Non-SOV Travel
 - Changes the weighting of the travel time measures from system-miles to person-miles traveled (AVO)
- New greenhouse gas emissions metric (% change in CO₂ emissions from CY17)

Metropolitan Planning

- Private Sector afforded a “seat at the table,” FHWA/FTA guidance forthcoming

Local Transit Benefit Ordinances

- San Francisco Bay Area, New York City and Washington DC
- 25x20 Campaign: Nearly ten cities in some stage of development

Infrastructure Package

- Where will the “trillion dollars” come from?

Public Policy THREATS to TDM

Congress

- Could remove transit from Highway Trust Fund (*"It's a local issue."*)
- Could eliminate/reduce the Qualified Transportation Fringe Benefit
 - Tax reform in "First 200 days," TNCs w/ 1 psnger could draw negative attention

The White House

- Could eliminate/reduce Federal TIP program (Executive Order)
 - Federal budget pressures, TNCs w/ 1 psnger could draw negative attention

Administration

- FTA: Funding pressures could focus all resources on "SOGR" maintenance
- FHWA: Funding pressures could focus all resources on highway maintenance
- EPA: Reclassification of non-attainment criteria could eliminate CMAQ eligibility

On-going issues for TDM

Generalizations (*there are always exceptions*):

- Public transit agencies have “ignored” suburban employers
 - Few offer “tailored” TDM services, or worse - they view TDM, as competition
- Most employers don’t want to “foot-the-entire-bill” for “TDM services” (Yet Google, Apple, Facebook, Yahoo, etc. are sometimes criticized for doing so!)
 - **Gain:** Pooling of resources funded TMAs
 - **Loss:** Lack of direct corporate commitment
 - **Challenge:** Employers reluctant to release employee commute info to aggregators
- Technology will solve our problems
 - “apps” could replace community-based rideshare matching
 - Difficult to “monetize” true carpool matching apps...
 - Why should passengers continue to pay for something they can continue to do without paying?*

TDM: Autonomous Cars (Opportunity)

- Flexibility to “order” (via app), pickup and deliver
- Increased safety (fewer fatalities and injuries)
- Decreased insurance costs
- Reduction in need for car ownership
- Reduced need for parking space in urban areas
- Reduction in greenhouse gas emissions
- Increased mobility for the young, old and infirmed

Behavioral effect: Surge and/or peak pricing will send strong signals to consumers about the prices they pay for their travel choices... TDM?

TDM: Autonomous Cars (Issues)

- Mass unemployment?
- Population decentralization and continued sprawl?
- Reduction in gas tax collection for roadway maintenance?
- Increased peak period utilization?
- Reduction in use of public transportation?
- Who is planning/regulating? Private operators or elected officials?

How much will it cost?

- Price is not the same thing as cost
- Much depends upon utilization
- Fleet operators likely won't own enough cars/vans to meet peak demand
- Uneven demand... Surge pricing

TDM: Autonomous Transit (Opportunity)

Would remove an important cost and several constraints

- With driver on every vehicle, labor is dominant cost of operations
- Allow efficient/economical service on low-demand routes
 - Frequency can be increased, attracting off-peak choice riders (SkyTrain)
- Allow higher avg speeds and reliability (mostly grade-separated)
- Allow “manned” buses on high-demand routes at little added cost

TDM: Autonomous Transit (Issues)

- Expensive to convert existing systems into “driverless”
 - Higher capital costs may not offset lower operating expenses
- Backlash from organized labor
 - Loss of jobs, labor protections, retraining
- Look to experiences in other countries
 - Paris, Stockholm, Vancouver “SkyTrain”
- Veolia is bringing electric “shuttles” to U.S.
 - Private sector settings only for “Last-mile” applications

In Summation...

- Predicting the future is extremely difficult
- Change is inevitable and always painful for some
- Congress will have a LOT to say about Future of TDM
 - Authorizations and Appropriations
 - Labor protections
 - Financing mechanisms
 - Performance incentives
- Private sector WILL play an ever increasing role
 - Employers and service providers