

Transportation Demand Management Workshop Region of Peel

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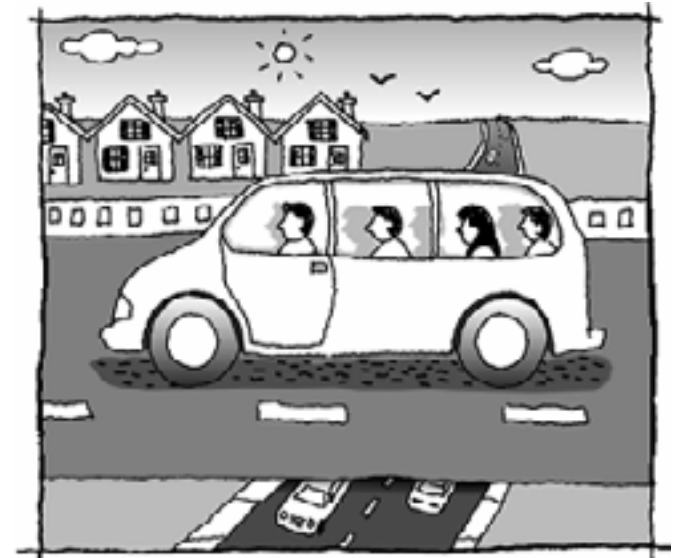
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Why Transportation Demand Management (TDM)?

- Demand management measures support a sustainable transportation system
- New facilities are more appealing when they maximize travel options
- Not everyone wants to drive alone to and from work or school or shopping



The Problem?

Impacts on People and Communities

- Over one third of Canadian drivers spend more than an hour on their commute
 - Suburban work trips increased 74% in the last 20 years.
- Over 25% of Canada's total emissions are from transportation
- Congestion costs the US \$78 billion (US\$) per year in wasted time and fuel



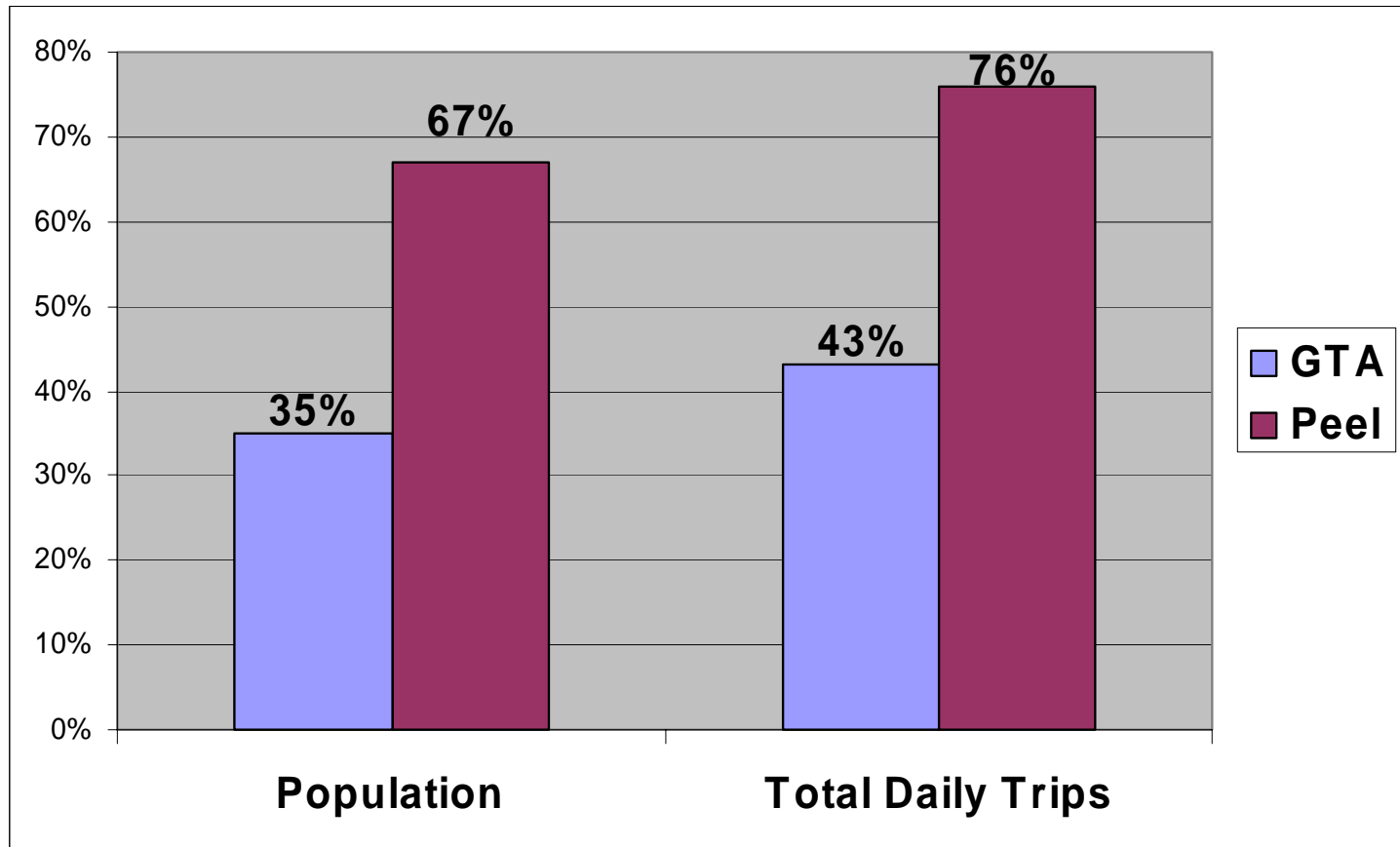
The Problem?

Impacts on Business and Economic Development

- Recruitment and retention
- Stress
- Limited site access
- Parking overflow
- Longer and more expensive commutes
- Clean air!

What Happened in Peel & GTA?

Percent Growth: 1986 - 2001



The Solution?

- There is no single solution
 - Over the past two decades keeping pace with demand would require:
 - Doubling the pace of road construction
 - OR -
 - Shifting 4% of SOV drivers to other modes, per year



Transportation Demand Management (TDM)

Components of TDM

1. Give travelers real choices
2. Provide incentives and information
3. Focus on partnerships



Transportation Demand Management

- Implementation
 1. Employer and Commute Based Programs
 - Rideshare, vanpool, transit subsidies
 2. Non-Commute Programs and Services
 - Special event shuttles, congestion mitigation
 3. Planning and Development
 - TOD, integration into city zoning regulations, incorporated into development



The Results of TDM

- 86% feel that commuter benefits are beneficial and useful
 - 17% of those surveyed have access to these benefits
- Single Occupant Vehicle (SOV) rate for employers **without** benefits is 86%
- SOV rate for employers **with** benefits is 71%

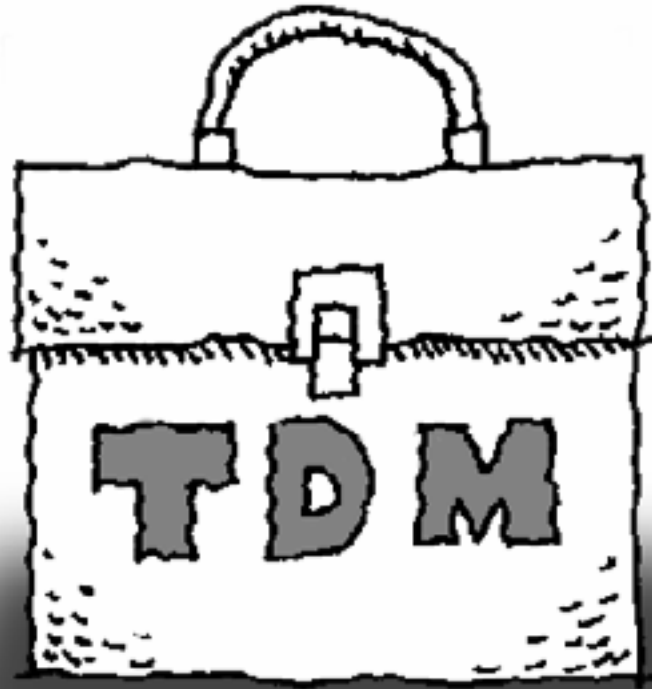


Applications of TDM

- Maximizing available infrastructure and services
- Reducing traffic
- Improving personal mobility
- Historic preservation
- Employee retention / recruitment
- Customer accessibility

What are the possible applications in the Region of Peel?

TDM Tools for the Peel Region





Core Strategies

- Mode Choice—How people travel
 - Carpooling
 - Vanpooling
 - Transit
 - Bicycling/Walking
 - Parking Management
- Time Choice—When people travel
 - Flex-time
 - Alternative Work Schedules



Core Strategies, Continued

- Route Choice—Which way people travel
 - Real time travel information
 - Route planning
- Location Choice—Where and whether people travel
 - Teleworking
 - Live/work location choices
 - Worksite amenities and design



Support Strategies

- Parking incentives and disincentives
- Employee Transportation Coordinators at area employers
- Rideshare matching
- Incentives and subsidies
- Marketing and promotions
- Guaranteed Ride Home



Support Strategies, Continued

- Intelligent Transportation Systems
- On-site Information and Amenities
- High Occupancy Vehicle (HOV) Lanes
- Bus Rapid Transit (BRT)
- Carpool parking lots
- TDM-friendly site design



TDM Strategies in Peel

What has been the experience with TDM strategies in the Region of Peel?

TDM-friendly Site Design & Amenities





Land Use, Transportation & TDM

- Connection between land use and transportation
- Role for TDM
- Increasing land-use density
 - On its own: small difference in auto usage
 - Combined with TDM elements: larger difference- 15 to 25 % reduction in VKT

Two Levels of Transportation & Access

- Region & City/Town Level (Vehicles)
 - Rail and bus transit
 - Vanpools / shuttles
 - Automobiles
- Neighborhood & Site Level (People)
 - Walking
 - Bicycling
 - Automobiles
 - Vanpools / shuttles
 - Transit stations



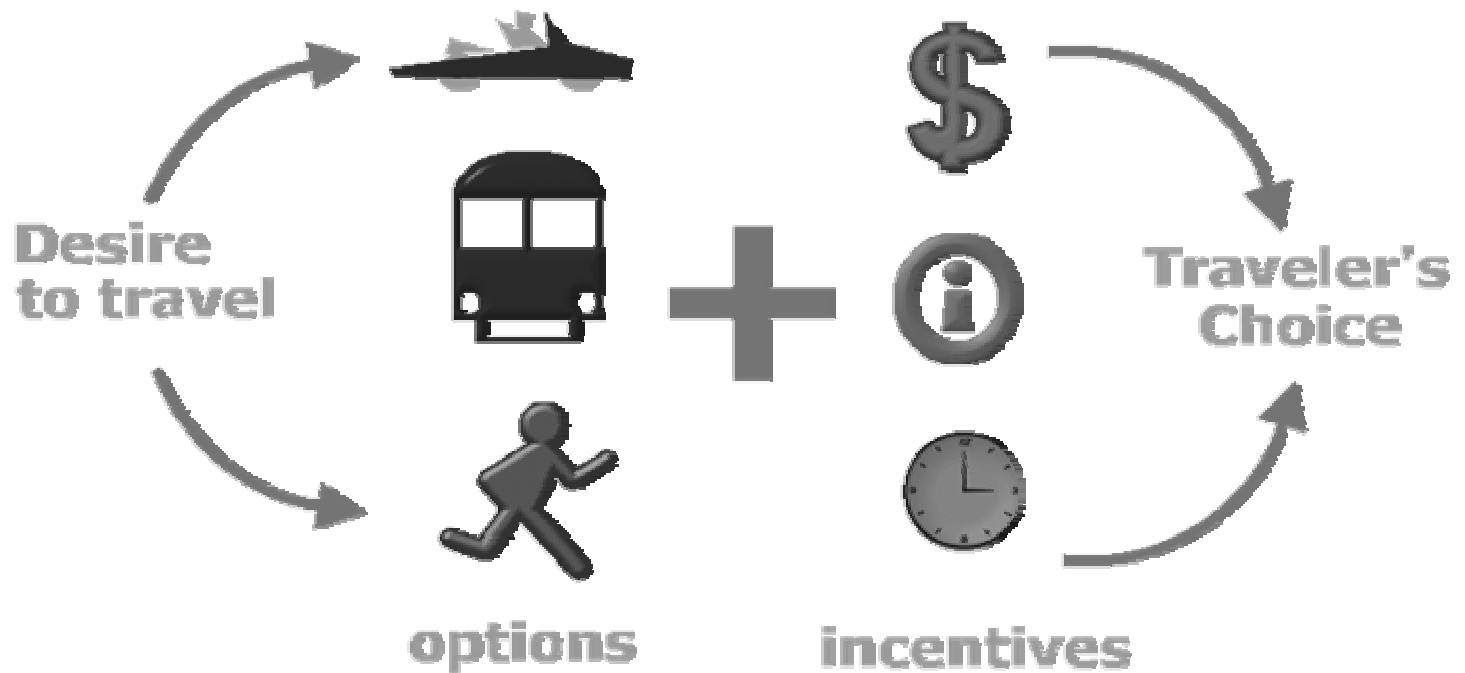
Impact of Improved Site Design

Research at several hundred work sites found:

<i>Land Use Characteristics</i>	<i>Transit with Land Use Characteristics Missing</i>	<i>Transit with Land Use Characteristics Present</i>	<i>Absolute Change</i>	<i>Percent Increase</i>
Mix of land use	2.9%	6.4%	+3.5%	120%
Transit accessibility	3.4%	6.3%	+3.3%	85%
Availability of convenience services	3.4%	7.1%	+3.7%	108%
Perception of safety	3.6%	5.4%	+1.8%	50%
Aesthetic urban design	4.2%	8.3%	+4.1%	102%

How It All Fits

Facilities & programs working together:





Case Studies

- Redmond, Washington USA: Willows Road Corridor
 - City allowed for increased FAR
 - Developer agreed to implement an enhanced transportation management program
- University of St. Thomas: Minneapolis, MN USA
 - Aggressive TDM Plan tied to downtown campus expansion
 - Value: US\$5,278,184
 - City model for future TDM Plans



Policy Changes?

- 1. Should new development projects be required to incorporate TDM-friendly site design elements?*
- 2. Would incorporating these elements reduce the region's competitive edge?*
- 3. What size of development should be required to incorporate these elements? What types of development?*

Transportation Management Associations (TMAs)

- Implementing TDM





Transportation Management Associations (TMAs)

- Key Characteristics
 - Initiated by the private sector
 - Network for employers, property managers, developers and public agencies – and occasionally resident groups
 - Funded through membership dues, assessments and/or public grants
 - Maintain a small staff



Transportation Management Associations (TMAs)

- Purpose
 - Reduce single occupant vehicle travel
 - Enhance competitiveness and economic development
 - Improve air quality
 - Provide forum for advocacy and information-sharing
 - Achieve economies-of-scale
 - Create the win-win-win solutions



TMA Facts

- Over 150 TMAs internationally
 - Primarily in the US, Canada, Japan and the Netherlands
- Between 1998 and today the net number of TMAs in North America has remained the same
 - Average of 4 new TMAs per year

TMA Survey

- 97 out of 139 (70%) U.S. TMAs responded to survey in 1993
- 7 out of 8 Canadian TMAs responded to survey
- Results:
 - Geographic Scope of TMAs Vary
 - Corridor (21%)
 - Regional (19%)
 - CBD (15%)
 - Specialized activity centers (14%)
 - Suburban/fringe activity centers (11%)
 - Citywide (6%)
 - Other (14%)





TMA Survey: Results

- Membership
 - 56% have under 40 members
 - 23% have over 88 members
 - Majority of members are business employers
- Primary travel market ranges from 300-400,000 commuters
- 58% serve additional travel markets
 - 45% Students
 - 40% Residents
 - 29% Visitors
 - 5% Other (hospital related, airport, special event, etc.)

TMA Survey: Results

- Services

- Marketing and Education

- Marketing materials (88%)

- Promotional events and fairs (83%)

- Regional/Local Advocacy

- Represent member needs to decision makers (74%)

- Promote TDM-friendly site design (37%)

TMA Survey: Results

- Services, continued
 - Direct Member Services
 - Rideshare matching (86%)
 - Guaranteed Ride Home (78%)
 - Vanpool programs (66%)
 - Bicycle programs (56%)
 - Direct rideshare incentives (54%)
 - Subsidized transit passes (53%)
 - Telecommuting assistance (53%)
 - Shuttles/local transit (52%)
 - Parking management (25%)
 - Carshare programs (25%)



What are the Benefits of a TMA?

- Improved access for employees, patrons and visitors
- Assist with employee recruitment and retention
- Help manage limited parking
- Shape public policy
- Enhance public image
- Help improve the economic vitality and quality of the community
- Assist in meeting climate change (global warming) and clean air commitments

Are TMA's Right for Peel?

- *Are Transportation Management Associations the right fit for Peel?*
 - Airport?
 - University?
 - Town/City Centers?
 - Residential Areas?
 - Freight Areas?
 - Other???



TDM Effectiveness

David Ungemah



TDM Effectiveness

- TDM is often effective in site-specific situations
 - Up to 25% fewer vehicle trips
- Area-wide not able to gain consistent results
- Program maintenance is needed in most situations
- Education and marketing are essential



Effectiveness

- Results
- Costs
- Politics



Results

- Modal Shift
 - SOV reduction
 - Targeted mode increases
- VKT Reduction
 - Estimated by mode shifts and average trip lengths

Costs

- Cost to Implement
 - Public sector
 - Private sector
- Cost Effectiveness
 - Cost relative to modal shift
 - Cost relative to VKT reduction



Politics

- Political Palatability
 - Controversial strategies
 - Non-controversial strategies
- North American Adoption
 - Lead or follow?
- Local Adoption
 - Experience in the GTA



Implementing TDM Strategies

- Metropolitan Policies and Programs
 - Best addressed in a GTA context
- Regional Government Policies and Programs
 - Best addressed within the Region and its municipalities



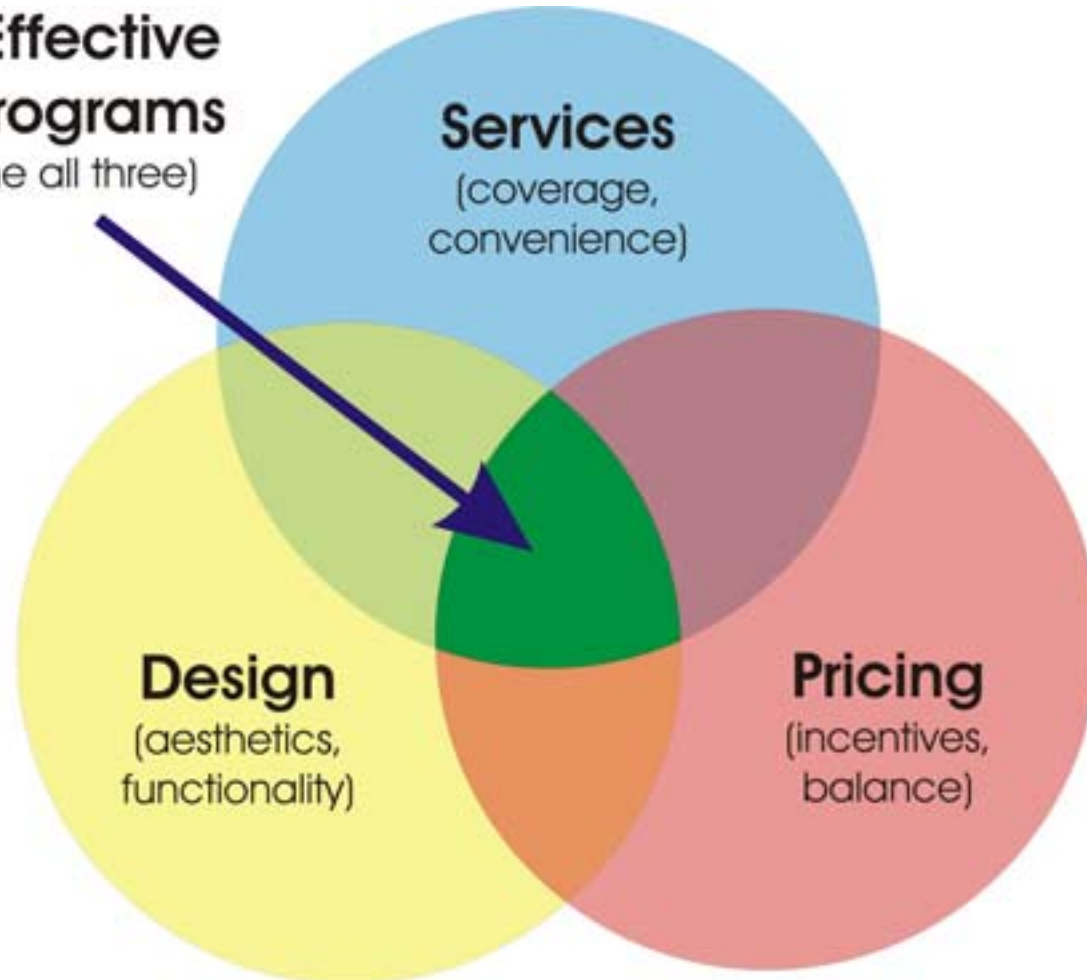
Transportation Management Programs

- School Programs
- Employer Programs
- Employee Transportation Coordinator Networks
- Neighborhood Transportation Cooperatives
- Property Owners Association
- Transportation Management Associations

Packaging TDM Strategies

Most Effective TDM Programs

(combine all three)





Packaging TDM Strategies

- Modal Promotion Strategies
- Efficiency Strategies
- Financial Incentives
- Pricing Strategies
- Facility/Land Use Elements
- Implementation Options

Mix and Match



Sample Package

- Encouraging use of transit
 - Commuter Club (regional)
 - Transit fare subsidies (regional)
 - Bicycle / Pedestrian connections to transit stations (local)
 - Bus shelters on site (development)

North American Experience

Strategy	Basic	Enhanced	Aggressive
<i>Transit TDM</i>	1-4%	4-6%	7-15%
<i>Bike / Walk</i>	1-2%	2-6%	4-9%
<i>Carpooling</i>	1-5%	3-12%	15-25%
<i>Vanpooling</i>	1-2%	2-3%	5-10%
<i>Telework</i>	5-10%	7-20%	15-25%

Site-base reduction in commuter SOV percentage.



Average TDM Effectiveness

<u>Strategy</u>	<u>Auto Trip Reduction</u>
Financial Incentives	3-7% (\$1/day) 6-15% (\$2/day)
Parking Cash Out	10-13% (worksite)
Compressed Work Week	7-10% (worksite)
Telework	1-4% (area)
Walk/Bike Improvements	1-2% (area)
Carpooling/Vanpooling	1-3% (area)
Marketing and Promotion	1-3% (as support)



Case Study: South Lake Union

- Seattle metro area
- Light industrial primary land use
 - Redeveloping environment
- Growing employment node
 - Existing employment: 22,300
- Established policy for encouraging TDM adoption at local employers



Case Study: South Lake Union

- Transit services:
 - Some local routes
 - No express / rapid routes
- Parking:
 - Free on-street
 - Free and very low cost surface lots
 - Future demand likely to exceed supply
- Bike/Ped:
 - Good sidewalks, no bike routes



Case Study: South Lake Union

- TDM Strategies implemented:
 - Telework
 - Flexible work arrangements
 - Guaranteed Ride Home
 - Ridematching
 - Alternative mode subsidies
 - Bicycle amenities

Case Study: South Lake Union

○ Results:

- 1993 – 68% SOV, 16% pool, 10% bus
- 1995 – 66% SOV, 18% pool, 9% bus
- 1997 – 65% SOV, 18% pool, 11% bus
- 1999 – 60% SOV, 19% pool, 13% bus
- 2001 – 53% SOV, 22% pool, 18% bus



Group Exercise

- Your Task:
 - Identify 4-8 key TDM activities that should be pursued by the region, local government and employers.
 - Activity Groups
 - Market strategies
 - Direct services
 - Public policy
 - Facility Design



Group Exercise Results

- Activity Groups
 - Market strategies
 - Direct services
 - Public policy
 - Facility Design



Next Steps

- Workshop Summary
- TDM Policies
- TDM Program and Implementation Strategies