

## Transportation Demand Management Overview of Tools and Strategies



## What and Why?

## Maintaining Quality of Life, Work, and Health

Theoretical Capacity


## Types of travelers

## Convinced \& committe Capable, but cautious

## Interested, but skeptical

No way, no how
Have used alternate modes occasionally but uncertain of them for regular use

Would use alternate travel if they had knowledge of them and they were of equal value

Tinis is O.K. TOO! If an informed choice

(How do you know it will work?)

TOOLS OF THE TRARE

## Information and Travel planning apps

Multimodal trip planning

May include:

- Trip time estimation
- Cost comparison estimation
- Calorie count estimation
- Carbon calculator
- Weather forecast

Needs to be:

- Accurate and reliable
- Easy to use
- Mobile
- Dynamic


Flickr User John Braken

## Bicycle Access and Use



Bicycle facilities (quality and sufficient quantity of racks, lockers, showers ....even bicycle benefits)

Bike share expansion, promotion and use


## Pedestrian Improvements

Good site design to enhance pedestrian connections and safety

Comfortable and interesting environment

Mixed land uses


## Transit Programs

Shuttles

Discount fares

Universal pass

Employee discount or employer incentive


## Vanpool, carpool, rideshare and ride matching

Transit extender

Subsidized lease

Insurance

Ride matching

Reduced parking rates and other benefits


Washington State Department of

## Car Share

Can take the place of fleet vehicles

Available vehicle for when employees, residents, or students want or need a car

Each car share vehicle eliminates demand for 11-25 private vehicles and each car share member reduces their driving by an average of 50\%


Source: WikiMedia Commons

## Guaranteed Ride Home

Low cost, big impact

Gives travelers confidence to use other modes

"in case something happens"

Very rarely called up

## Telework, online study or alternative work schedule

Increases employee morale

Decreases absenteeism

Maintains or increases work productivity

Not practical for all positions or industries


Flickr User RoberDan
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## Housing Programs

## Live near work

Promotion
Real estate matching

Employer assisted housing

Employer provided housing


## Parking Management

Parking cash-out programs

Parking permit reform (buy only what you need)

Demand-based pricing and variable pricing

Tailor parking requirements


Credit: Joel Dinda


## Cost - household

- Driving
- ~\$9,122/year (AAA)
- \$833/month + \$126/mo pkg
- ~\$950/month auto commute
- Transit
- ~\$6.30/roundtrip
- \$245/mo (deductable)
- = ~2 roundtrips/work day
- Bicycle

- \$75/year bikeshare = \$6/mo
- \$1,500/bike (8 year) = \$15/mo



## $\$ 20,000$

## $\$ 20,000$

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\$ 20,000
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Cost - institution

|  | Surface | Above Grade <br> Ramp | Below Grade <br> Garage |
| :--- | ---: | :--- | ---: |
| Capital cost (per space) | $\$ 10,000$ | $\$ 20,000$ | $\$ 40,000$ |
| @ 7\% interest (30 yrs) | $\$ 25,000$ | $\$ 47,900$ | $\$ 95,800$ |
| Monthly cost | $\$ 70$ | $\$ 135$ | $\$ 265$ |
| O\&M | $\$ 15$ | $\$ 65$ | $\$ 80$ |
| COST RECOVERY ( / mo) | $\$ 85$ | $\$ 200$ | $\$ 345$ |

## Competitiveness

## New American Transit <br> young Americans shift away from a car-driven culture

"There's a cultural change taking place... younger consumers are viewing an automobile with a jaundiced eye. They don't view the car the way their parents did \& they don't have the money that their parents did." $\sim$ John Casesa auto industry veteran

average cost of driving +0,

## 80\%

of 18 to 34-year-olds stated the cost of gasoline, parking \& maintenance made owning a car difficult


16 to 34 year-olds in households with incomes
earning more than $\$ 70,000$ per
\$70,000 year are increasingly choosing to not drive, instead increasing use of...

## $\square$ transit by cycling by $\%$ walking by <br> 

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MEASURABLE IMPACT

## Measuring Impact and ROI

| Strategy | Details | Employee Vehicle Trip <br> Reduction Impact |
| :--- | :--- | :--- |
| Parking Charges | Previously Free Parking | $20 \%-30 \%$ |
| Information Alone | Information on Available SOV <br> Alternatives | $1.4 \%$ |
| Services Alone | Ridematching, Shuttles, <br> Guaranteed Ride Home | $8.5 \%$ |
| Monetary Incentives Alone | Subsidies for carpool, vanpool, <br> transit | $8-18 \%$ |
| Services + Monetary Incentives | Example: Transit vouchers and <br> Guaranteed Ride Home | $24.5 \%$ |
| Parking Cash Out | Cash benefit offered in lieu of <br> accepting free or subsidized <br> parking | $17 \%$ |

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