

New Sector Involvement



A NEW PARADIGM

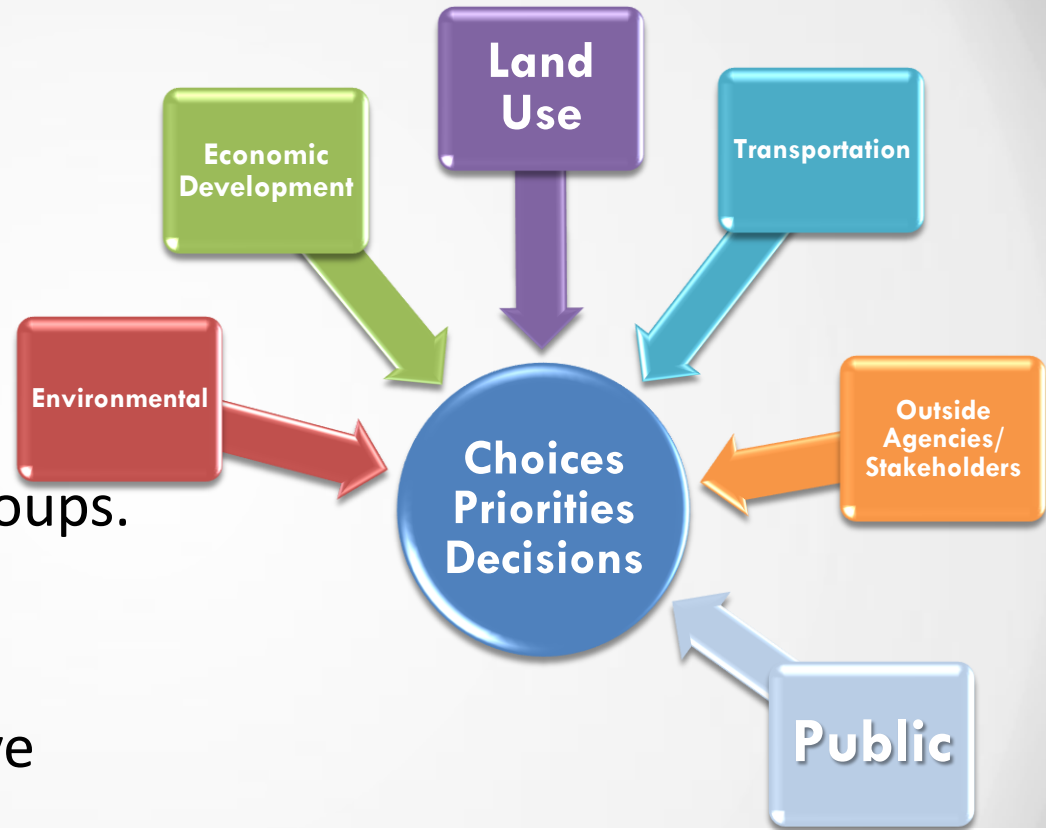
- Link land use with transportation:
 - Land use arrangement to reduce peak hour auto trips.
 - Site design to support bicycling/walking/transit.
 - Combine land-use planning with transportation planning (regional, community, and site specific).
- Increased cooperation among all parties involved in land use and transportation.
- Operate in limited funding environment by planning practical (and affordable) and sustainable solutions to meet our transportation system needs.



Photo: LSL Planning, Inc.

ROLE OF THE TRANSPORTATION PLANNER

- “Bridge the gap”.
- Educate parties in an understandable way.
- Focus on long term.
- Advocate for underserved groups.
- Environmental justice.
- Use transportation to improve community sustainability.



PUBLIC INVOLVEMENT

- Facilitate, educate to gather meaningful input.
- Brochures.
- Open house.
- Public workshops.
- Advisory committees.
- “Road show” .
- Visualization/simulation.



Photos: Courtesy of LSL Planning, Inc.

A TRANSPORTATION PLANNER DOES . . .

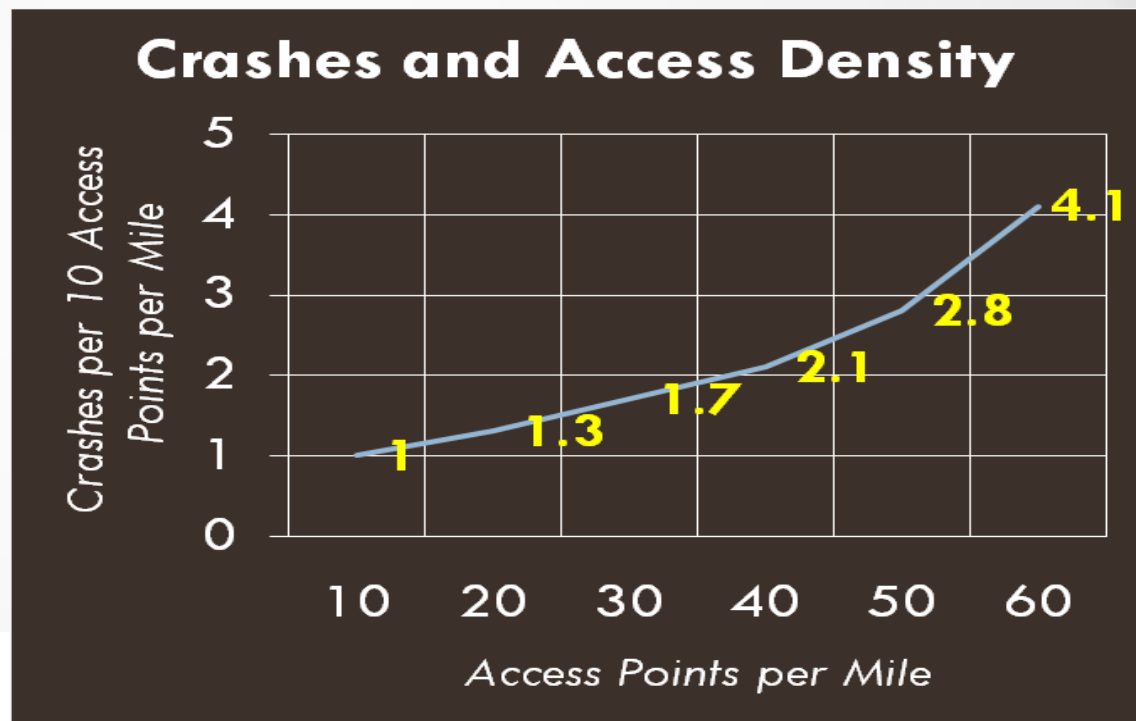
- Long range plans.
- Corridor simulation models.
- Flexible design/street widths/road diets (traffic calming/CSS).
- Non-motorized plans & walk able design.
- Demand management.

- Transit oriented land use and design .
- Access management.
- Overlay zones.
- Form-based codes.
- Transportation to support economic development.



BENEFIT : SAFETY

- Access management can help reduce injuries and property damage due to crashes .
- Doubling of access density from 10-20 access points per mile often results in about a 40% increase in expected crash rates*.



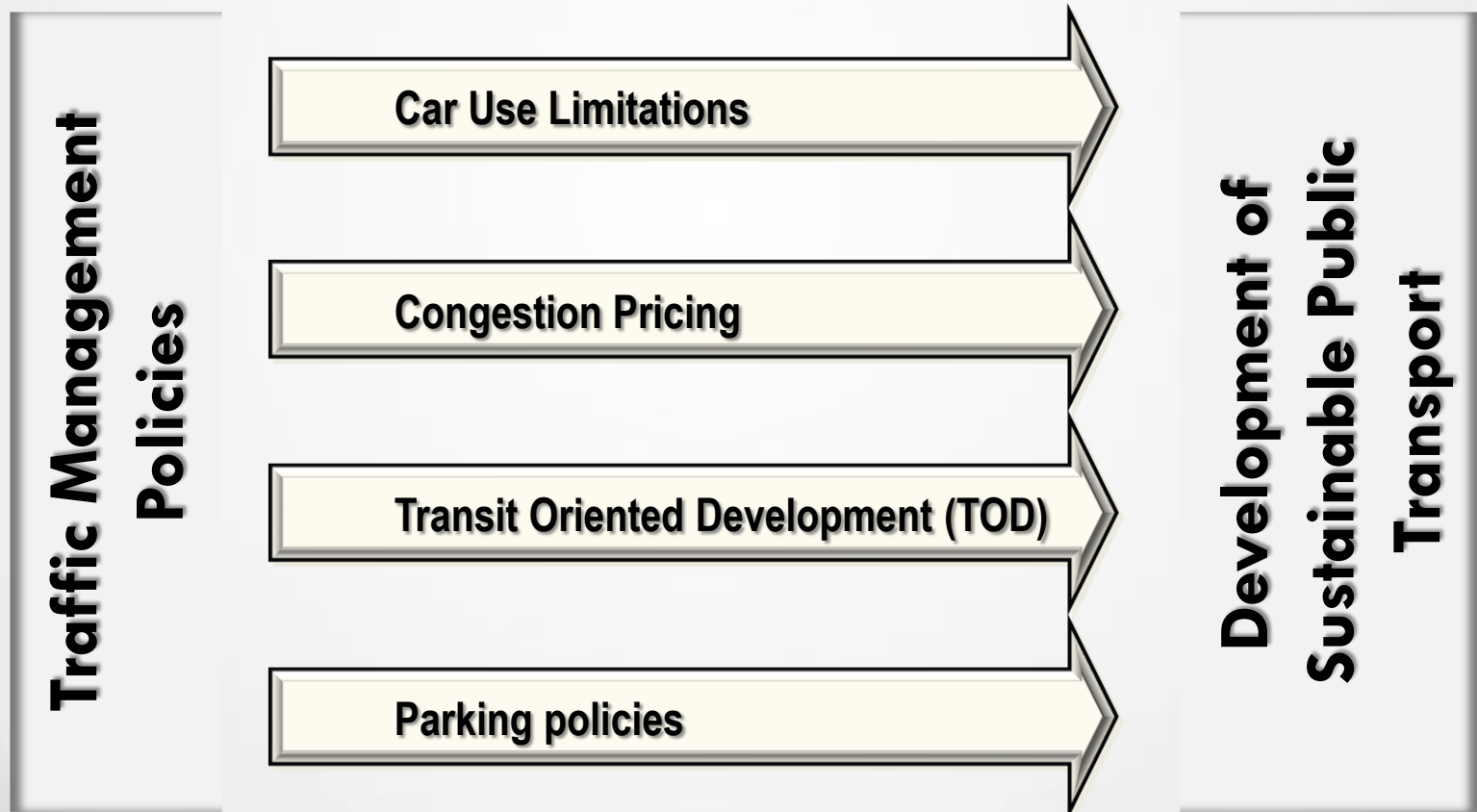
*according to the Michigan Department of Transportation

Transport Policies



Traffic Management Policies

Internationally applied Traffic Management policies and measures:



Traffic Management Policies

Car Use Limitations – Int. Practices:

Car-Free Day Policy

Banning the use of private cars in selected day of the week/month, e.g. Bogota, (Colombia), Jakarta (Indonesia), Reykjavic (Iceland), Bath (Britain) and La Rochel le (France)

Odd-Even Number Scheme

Allow the odd numbers in one day and even numbers in the other day, e.g. Athens (Greece), Beijing (China) and Manila (Philippines)

Car Restricted Area (ALS)

Limit the allowed vehicles accessing some congested areas (e.g. the CBD), e.g. London (UK) and Singapore

Vehicle Quota System (VQS)

Fixing an annual ceiling on the number of private cars that can be registered, e.g. Singapore

Limit Car Licenses

Restrict car permits to certain groups who are in need of using private cars, e.g. Beijing and Shanghai (China)



Traffic Management Policies

Congestion Pricing– Int. Practices:

❑ Variable priced lanes

Variable tolls are applied on separated lanes within a highway, such as Express Toll Lanes or HOT Lanes, i.e. High Occupancy Toll lanes

❑ Variable tolls on entire roadways

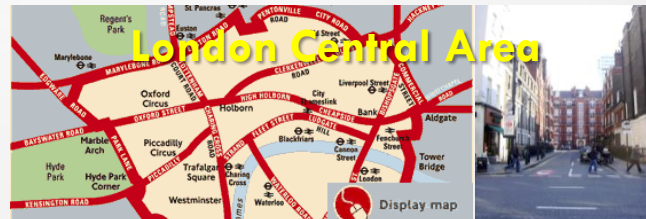
On roads and bridges, as well as on existing toll-free facilities during rush hours

❑ Charge for Driving in CBD Congested Areas

Either variable or fixed charges to drive within or into a congested area in a city

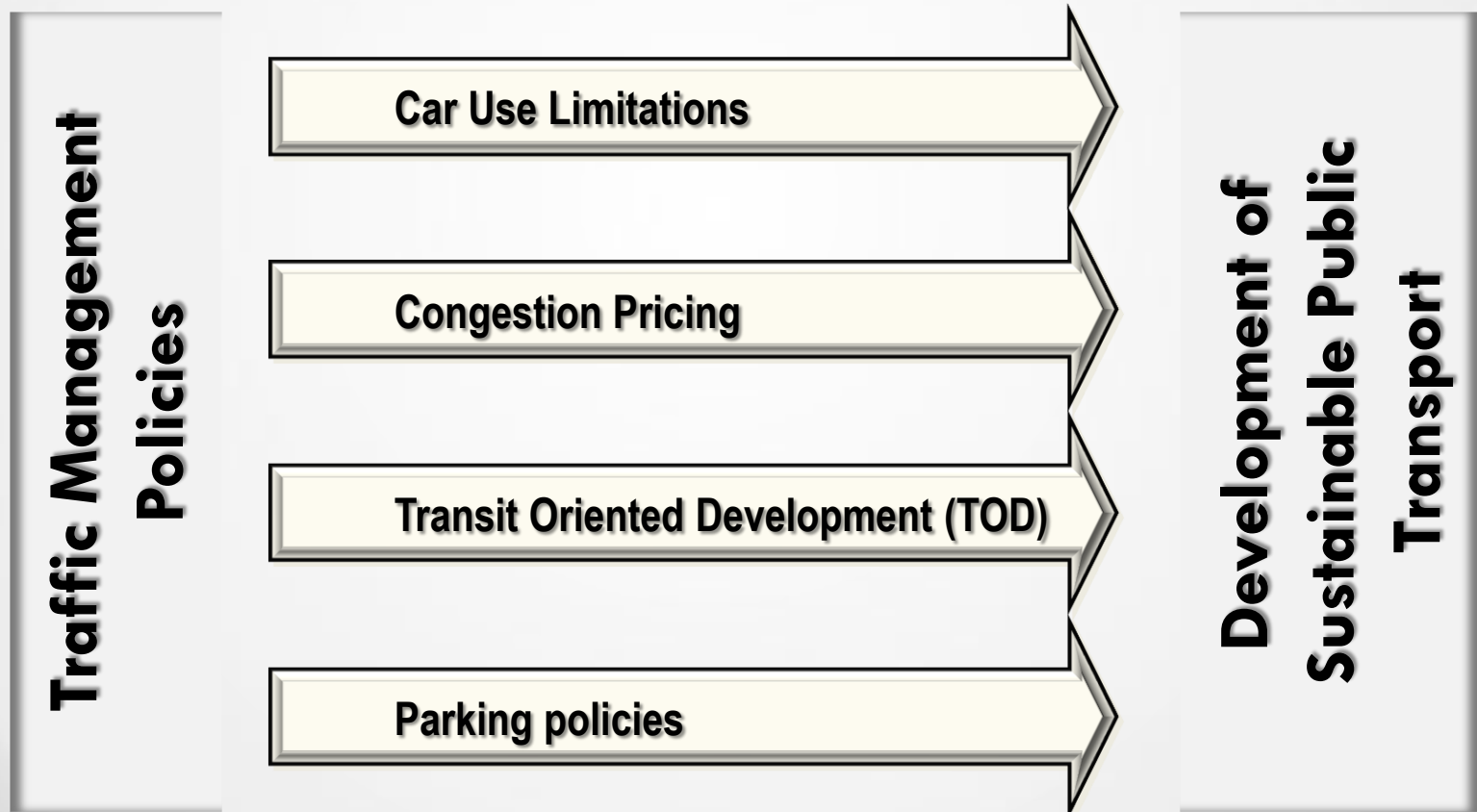
❑ Area-wide charges (KM)

Per-mile charges on all roads within an area that may vary by level of congestion



Traffic Management Policies

Internationally applied Traffic Management policies and measures:



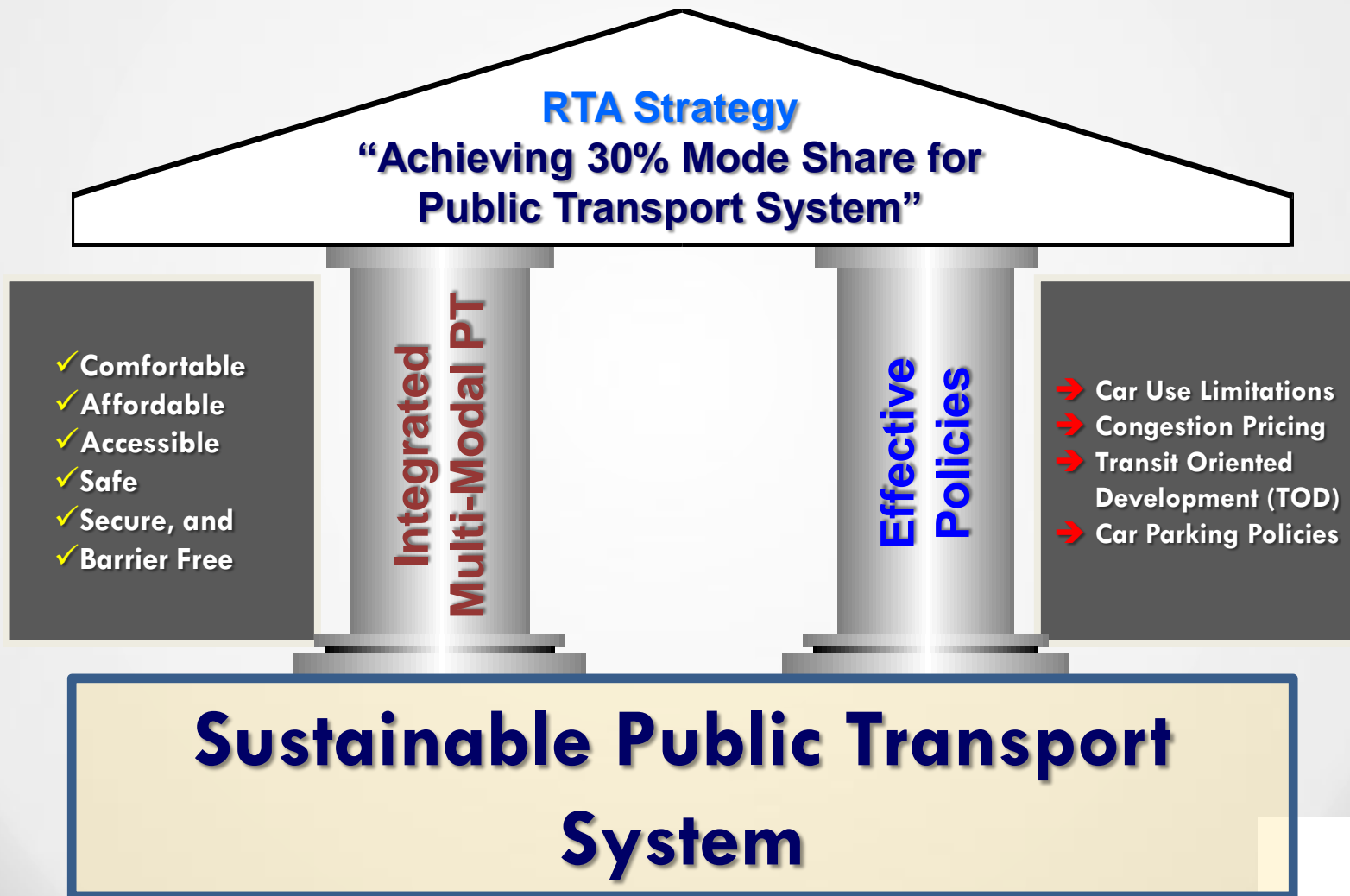
Traffic Management Policies

Parking Policies – International Practices:

- Limit the number of Parking spaces around Transit stations
- Parking Reservation System
 - Allow traveller reserve and pay for a parking space in park-and-ride facilities
- Designate Parking to serve users of car/van pooling
- Remote Park-and-Ride facilities and Shuttle Services



Bases of Promoting Transit-Oriented City



Design & Build



PLANNING, DESIGN, AND EXECUTION OF TRANSPORT PROJECTS

Strategy

Functional engineering

Technical engineering

Supply

Installation

Commissioning

Operations

Maintenance

The key to providing true value added solutions are technical knowledge and professional experience.

COMPARISON OF THE PLANNING PROCESSES

Land Use

Transportation

Goals

Qualitative and competing

Quantitative (Performance Measures)

Scope

Short term (5-15 years)

Long term (30 years)

Data

Mild influence

Data driven

Public Input

Big influence

May or may not influence

Priorities and Implementation

Often not specified

Specific with costs and funding

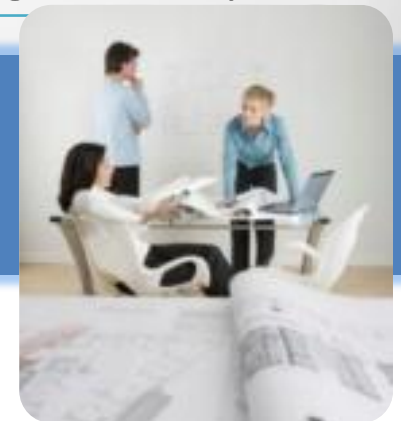
Practicality

Bold ideas / “just a plan”

Engineering feasibility

Major Difference:

- Transportation based on planned Land Use
- Land Use has limited consideration of transportation



Sustainable Development



WHAT IS SUSTAINABLE DEVELOPMENT?

WHAT IS TO BE SUSTAINED:

NATURE

Earth
Biodiversity
Ecosystems

LIFE SUPPORT

Ecosystem services
Resources
Environment

COMMUNITY

Cultures
Groups
Places

FOR HOW LONG?

25 years
"Now and in the future"
Forever

LINKED BY

Only
Mostly
But
And
Or

WHAT IS TO BE DEVELOPED:

PEOPLE

Child survival
Life expectancy
Education
Equity
Equal opportunity

ECONOMY

Wealth
Productive sectors
Consumption

SOCIETY

Institutions
Social capital
States
Regions

SUSTAINABLE PLANNING

Economic

- Affordability
- Resource efficiency
- Cost internalization
- Employment and business activity
- Productivity

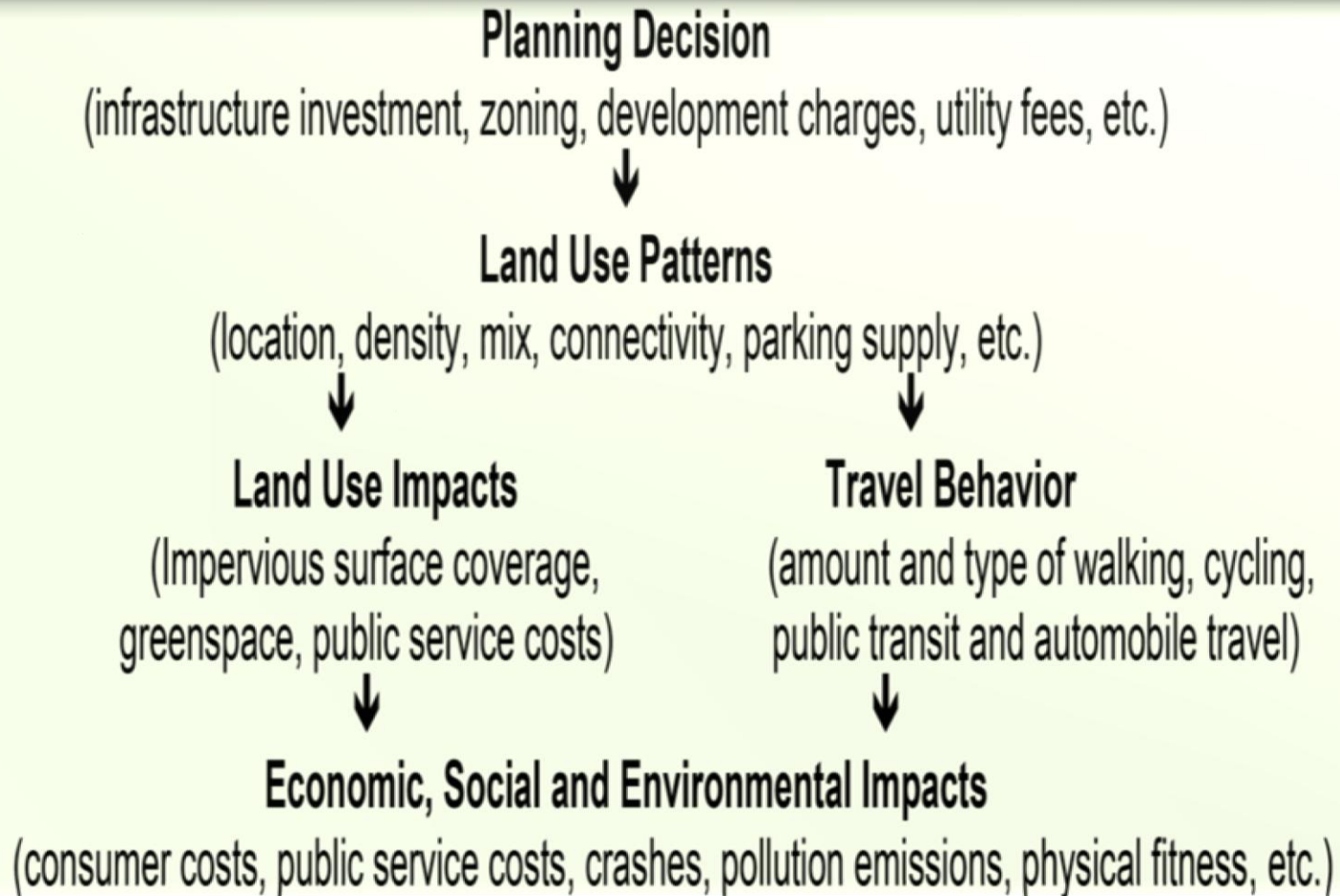
Social

- Equity
- Human health
- Education
- Community
- Quality of life
- Public Participation

Environmental

- Pollution prevention
- Climate protection
- Biodiversity
- Precautionary action
- Habitat preservation
- Aesthetics

PLANNING DECISION



PLANNING LEVELS

Planning can occur at various levels, scales and jurisdictions. Some reflect functional geographic boundaries and others reflect political jurisdictions, as listed below.

Functional/Natural	Political
Site Street Neighborhood Ecosystem/watershed Regional Global	Special service district Municipality/regional government State/provincial Federal

TRAVEL DEMAND

Demographics	Economics	Prices	Transport Options	Service Quality	Land Use
Number of people (residents, employees and visitors). Incomes Age/lifecycle Lifestyles Preferences	Number of jobs Incomes Business activity Freight transport Tourist activity	Fuel prices and taxes Vehicle taxes & fees Road tolls Parking fees Vehicle insurance Public transport fares	Walking Cycling Public transit Ridesharing Automobile Taxi services Telework Delivery services	Relative speed and delay Reliability Comfort Safety and security Waiting conditions Parking conditions User information	Density Mix Walkability Connectivity Transit service proximity Roadway design

IMPORTANCE OF PUBLIC TRANSPORT

Public transportation in the 21st century is on the move, as more and more Americans are discovering the benefits of traveling on buses, trains, sub-ways, trolleys and ferries.

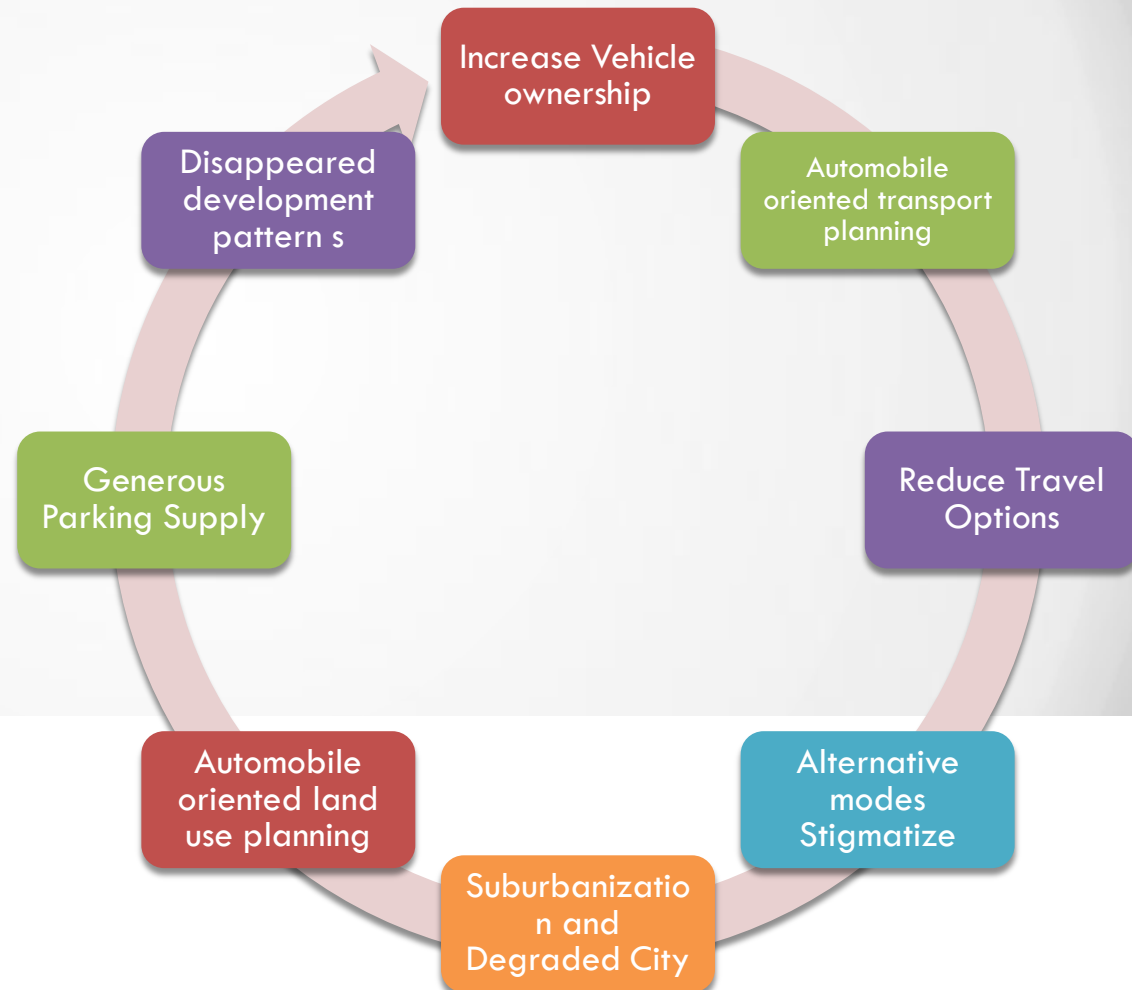


Transit Oriented Development



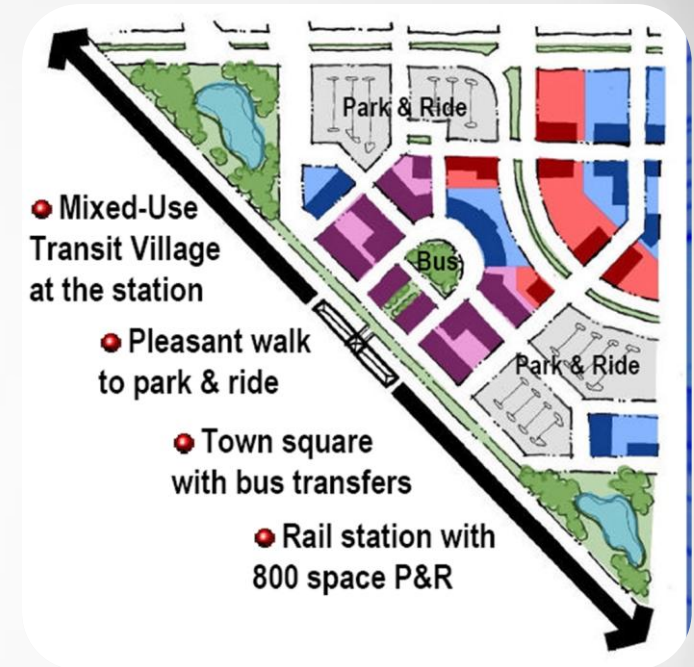
Car Ownership

During much of the last century there was a self-reinforcing cycle of increased vehicle ownership and use, reduced travel options, and more automobile-oriented land use development.



TRANSIT ORIENTED DEVELOPMENT (TOD)

- Moderate to higher density.
- Within an easy walk.
- A mix of uses.
- Designed for the pedestrian.
- New construction or redevelopment.
- Increases transit ridership.
- Strong benefits.



Strategic planning.

Establish a comprehensive community vision which individual transport and land use policies and planning decisions should support.

Encourage compact development.

Encourage higher development densities, particularly within existing urban areas or near activity centers, such as downtowns, commercial centers and transit stations.

Create more self-contained communities

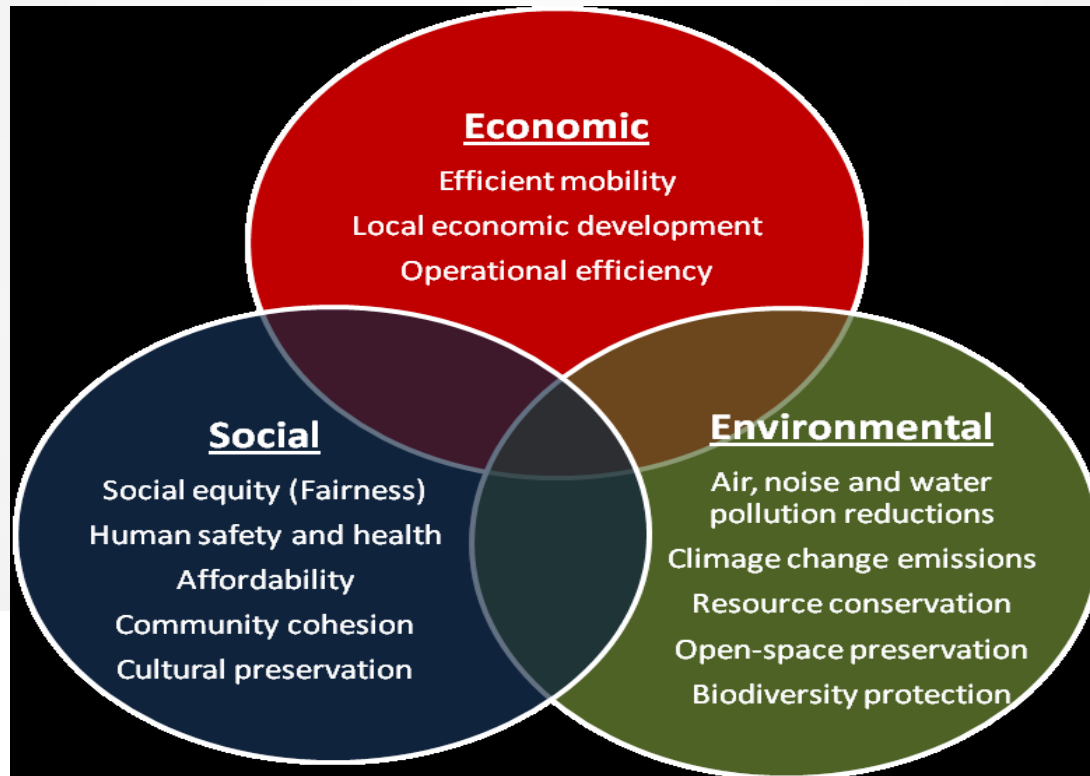
Locate various compatible land uses close together so people can reach commonly-used services by walking or short vehicle trips. For example, develop schools, shops and recreation facilities in or adjacent to residential areas. Mix land uses at the finest grain feasible.

Encourage a mix of housing types and prices

Develop affordable housing near employment, commercial and transport centers. Support second suites, apartments over shops, lofts, location-efficient mortgages and other affordable housing innovations.

SUSTAINABILITY PLANNING

Sustainability emphasizes the integrated nature of human activities and therefore the need to balance economic, social and environmental objectives.



Demand to Transit & Benefits

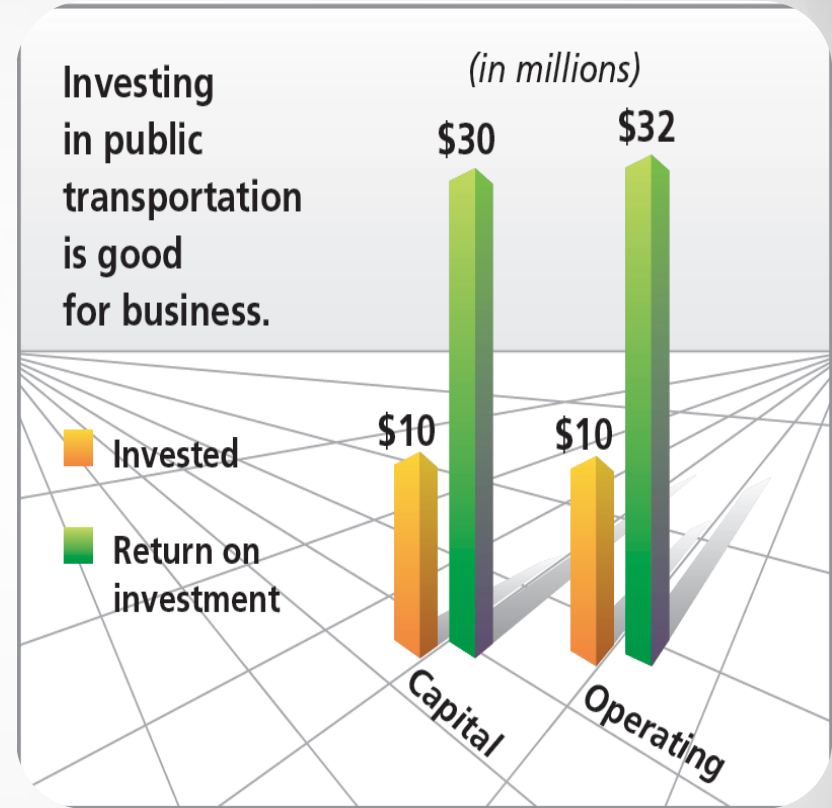


BENEFITS OF PUBLIC TRANSPORT

ENHANCES BUSINESS

Investing in public transportation is good for business. It is estimated that every \$10 million in capital investment in public transportation yields \$30 million in increased business sales, and that every \$10 million in operating investment in public.

transportation yields \$32 million in increases business sales.

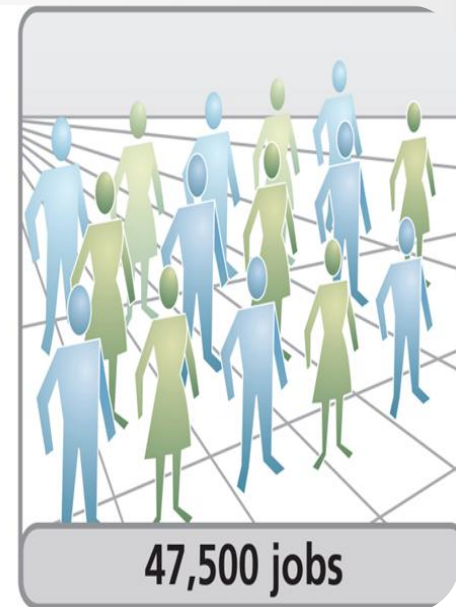
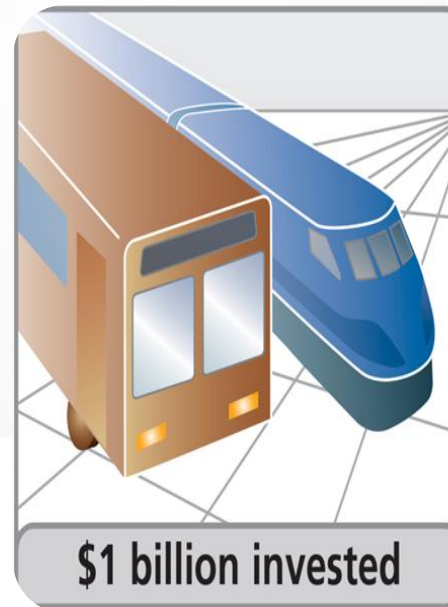


BENEFITS OF PUBLIC TRANSPORT

CREATES AND SUSTAINS EMPLOYMENT

Public transportation is also good for the workers and their companies. In the United States(US) Every \$1 billion of federal investment in the nation's transportation infrastructure supports and creates 47,500 jobs.

These include durable and non-durable manufacturing jobs, as well as jobs in non-manufacturing industries such as construction, finance, insurance and real estate, retail and wholesale trade, and service.



BENEFITS OF PUBLIC TRANSPORT

Public transportation not only helps to maintain and create jobs, it also moves people to and from their jobs. Businesses located near public transportation experience more employee reliability and less absenteeism and turnover. Employers have a larger labor pool from which to choose, and employees are happier because they are not driving in congestion delays.



Public transportation not only helps to maintain and create jobs; it also takes people to and from their jobs.

BENEFITS OF PUBLIC TRANSPORT

ENHANCES PERSONAL ECONOMIC OPPORTUNITY,
SAVES INDIVIDUALS MONEY

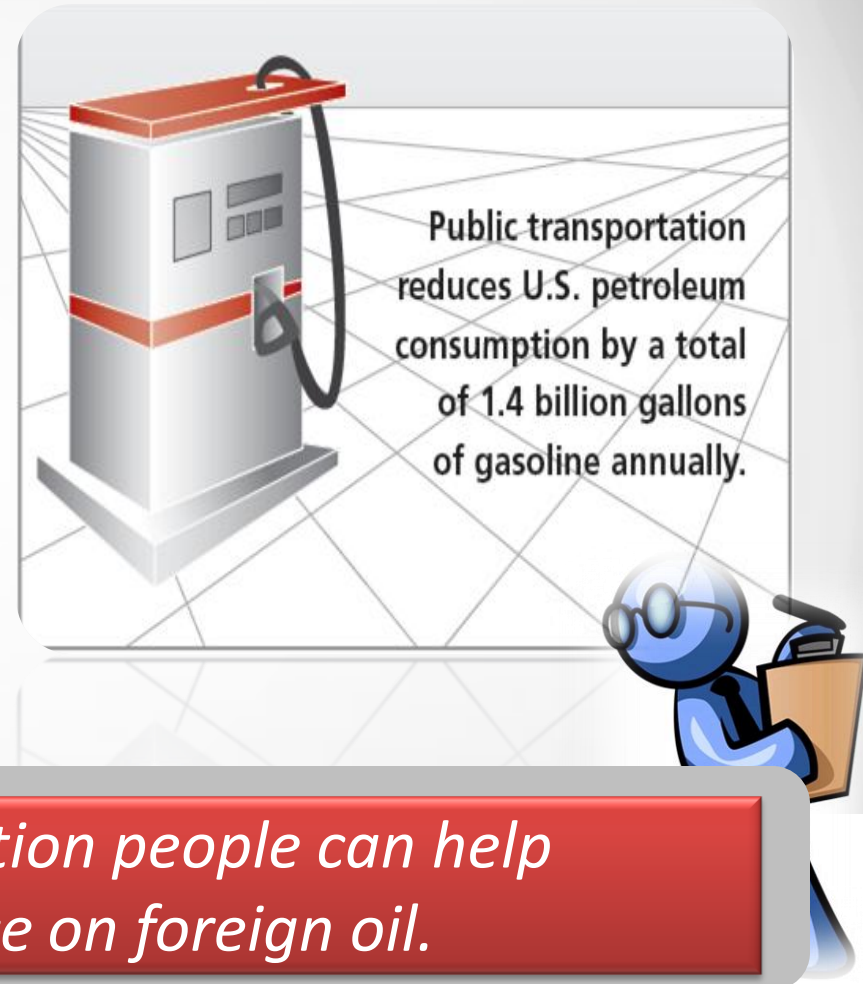
Public transportation use lowers household expenses and frees up more income for other needs. Automobile expenses are considerable:

- For every dollar earned, the average household spends 18 cents on transportation, 94 percent of which is for buying, maintaining and operating cars.
- The cost of transport for the community varies from 5% of GDP in dense cities with high public transport use to over 12% in sprawling cities where the car is virtually the only mode of transport
- Household transportation costs rise in areas with sprawl and few transportation services.

BENEFITS OF PUBLIC TRANSPORT

CONSERVES ENERGY, REDUCES OIL DEPENDENCE

With public support for expanded public transportation services, the transit industry will be able to make an even larger contribution to helping our nation become energy independent.



Just by taking public transportation people can help reduce our country's dependence on foreign oil.

BENEFITS OF PUBLIC TRANSPORT

RELIEVES CONGESTION

Mobility, the freedom and ability to travel, has always been an important part of the lifestyle. However, as more and more vehicles crowd the nation's roadways, traffic congestion is having an increasingly debilitating effect on our quality of life.

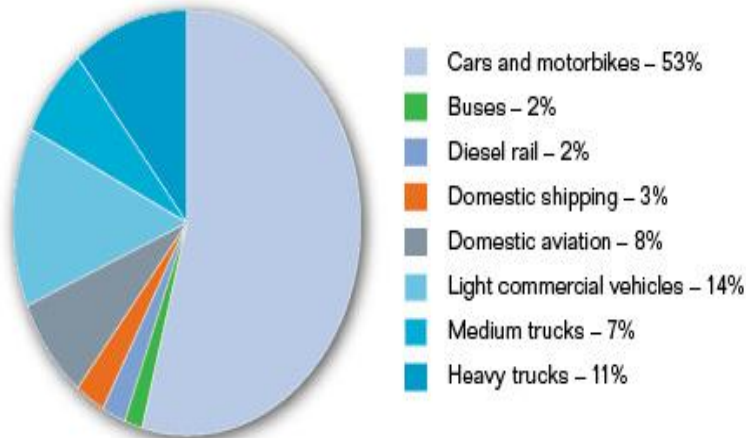


Without public transportation, travel delays would have increased by 27 percent.

BENEFITS OF PUBLIC TRANSPORT

PROTECTS THE ENVIRONMENT, IMPROVES AIR QUALITY AND HEALTH

Public transportation produces 95 percent less carbon monoxide (CO), 90 percent less in volatile organic compounds (VOCs), and about half as much carbon dioxide (CO₂) and nitrogen oxide (NO_x), per passenger mile, as private vehicles. Energy-related carbon dioxide emissions represent 82 percent of total U.S. human-made greenhouse emissions.



BENEFITS OF PUBLIC TRANSPORT

PROTECTS THE ENVIRONMENT, IMPROVES AIR QUALITY AND HEALTH

Lower rates of respiratory and heart disease. The health effects of mobile source pollution can be severe and even life-threatening, particularly to children, older adults and adults with respiratory illnesses.

Lower accident rates

Quality of life

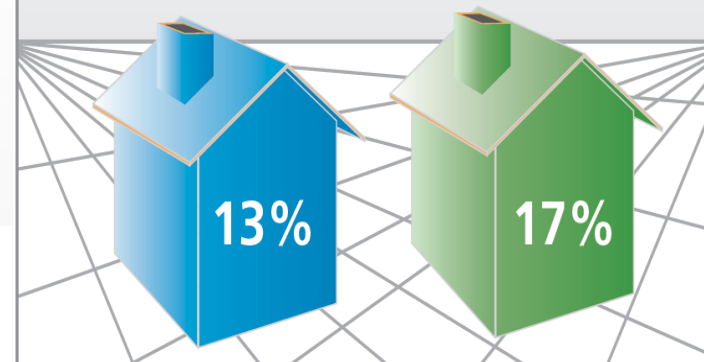
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BENEFITS OF PUBLIC TRANSPORT

INCREASED REAL ESTATE VALUES AND DEVELOPMENT

Residents and community leaders across the nation are recognizing that fully functional, high-capacity, regional public transportation services are essential to grow America's communities in a way that enhances and promotes real estate development. In addition, communities that invest in public .

**Public transportation
enhances property values**



Residence values of properties located near transit were 13% higher in Dallas and 17% higher in San Diego.