The Benefits of Public Transportation

AN OVERVIEW

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Public Transportation: The Need is Now
Public transportation is undergoing a renaissance in the U.S., but more is needed. An overview of the benefits provides a powerful rationale for investing in its future.

Links to National Goals and Policies
Public transportation is vital in helping the U.S. enhance safety and security, protect the environment and public health, and conserve energy.

Benefits for Individuals and Families
Public transportation provides access, choice and economic opportunity for millions of Americans.

Benefits to Business and Industry
Employers throughout the U.S. are taking advantage of public transportation to attract larger and more reliable work forces and save in a variety of ways.

Benefits for Communities and Local Governments
Communities that invest in public transportation realize enhanced development and prosperity in the form of more jobs, revitalized business and activity centers, and an expanded tax base.

Benefits for Public Programs and Community Services
Public transportation means savings for human services programs, more access to healthcare and education, and a vital link for seniors, the disabled and children.

Benefits for Metropolitan America, Small Urban and Rural Areas
With public transportation, metropolitan areas can remain economic engines, small urban communities help maintain their character, and residents in the rural heartland have critical access to jobs and more.

Benefits of Partnership and Collaboration
Government and the private sector have been successfully working together to fund, develop and upgrade the U.S. public transportation network.

Primary Sources
Throughout the U.S., public transportation is undergoing a renaissance. Steady increases in transit investment have dramatically improved and expanded public transportation services, attracting record numbers of riders on state-of-the-art systems in metropolitan, small urban and rural areas alike.

In the last six years alone, public transportation use has risen 22%—faster than vehicle miles traveled on our roadways and airline passenger miles logged over the same period. In 2001, Americans used public transportation 9.5 billion times—the highest ridership level in 40 years.

Communities across the country are rehabilitating and expanding public transportation systems and constructing new ones. Currently:

- 556 local public transportation operators provide services in 319 urbanized areas with a population of over 50,000.
- 1,260 organizations provide public transportation in rural areas.
- 3,660 organizations provide services to the aging population and disabled individuals.

Through improved mobility, safety, security, economic opportunity and environmental quality, public transportation benefits every segment of American society—individuals, families, businesses, industries and communities—and supports important national goals and policies.

At the same time, the growing problem of traffic congestion continues to choke America’s roadways and restrain community and business development.

This fact-filled report provides an overview of the benefits public transportation brings to America. Public transportation is taking on an increasingly important role in America’s multimodal transportation network. Its broad reach extends to all of America’s communities, large and small, and all of Americans’ diverse lifestyles, providing freedom and mobility for citizens across the country. It also supports the country’s critical national goals and policies, including helping to conserve energy resources, thereby decreasing the dependence on foreign oil.

The rebirth of public transportation is a critically important part of America’s future, providing more capacity, creating more choices and helping address the needs of a growing and changing population.

These myriad benefits of public transportation provide a powerful rationale for investing in the future upgrade and expansion of the nation’s public transportation network.

For companion documents that describe in greater detail the varied benefits that public transportation provides you and residents of your community, contact your local transit agency or APTA at (202) 496-4800, www.apta.com.
Public transportation helps lead the nation towards its goals and policies of protecting the environment, conserving energy, and providing for the health, safety and security of its citizens.

Safety and security

Compared to road systems, transit systems are significantly safer. Trips with similar destinations result in 200,000 fewer deaths, injuries and accidents when made by public transit than by car, adding up to between $2 billion and $5 billion per year in safety benefits. The National Safety Council estimates that riding the bus is over 170 times safer than automobile travel.

Featuring new visual, voice and data communications systems linking vehicles, stations and riders with state-of-the-art operations centers, transit systems also provide more security than roadways. In fact, many transit systems now formally serve as safe havens for children and students moving throughout communities. Systems on the leading edge include:

- Cincinnati’s SORTA, one of many that is installing state-of-the-art cameras throughout its bus system
- Washington, DC’s WMATA, which is deploying state-of-the-art chemical sensors on the Metro rail system

Increased resiliency and redundancy—helping in emergencies

Time and time again, the availability of public transportation in times of emergency—both natural and man-made—has proven to be critical in maintaining basic access, mobility and safety for individuals who come in harm’s way. The value of public transportation services in providing essential redundancy and resiliency in our transportation network cannot be overstated.

- By midday, September 11, 2001, New York’s MTA subway and commuter trains and buses were evacuating millions of commuters from Manhattan. Following the attack on the Pentagon, Washington, DC’s WMATA moved hundreds of thousands of commuters safely and provided buses to deploy police and to serve as shelters for rescue workers.
- In 1999, public transportation systems in North Carolina transported volunteers, evacuated residents and raised funds across the state for victims of Hurricane Floyd and, in Flint, MI, evacuated a senior citizen’s complex after a gas explosion.
- In 1998, public transportation systems transported firefighters to wildfires in Florida and evacuated tornado victims in Nashville.
- San Francisco’s BART system supported commuters and the regional economy following the collapse and reconstruction of major road segments after the Loma Prieta earthquake in 1989.

And public transportation systems around the country aided passengers stranded by the air system shut downs.

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A cleaner environment

Emissions from road vehicles are the largest contributors to smog. Over 200 million passenger cars and light trucks log almost 2 trillion miles on American roads every year. These vehicles account for about 50% of air pollution nationwide—even higher in polluted cities.

The smog-filled air is devastating to the environment, reducing growth and survival of tree seedlings, and heightening the susceptibility of plants to disease and pests, among other damages.

In addition, surfaces paved to accommodate more traffic result in increased urban runoff, which is responsible for:
- 55% of environmentally impaired ocean shorelines
- 46% of impaired estuary shore miles
- 21% of impaired lakeshore miles

Increased investment in and use of public transportation provides significant, direct environmental benefits and helps meet national air quality standards. By reducing smog-producing pollutants, greenhouse gases, and run-off from paved surfaces that degrades the water supply, and by conserving ecologically sensitive lands and open spaces, public transportation reduces pollution, thus protecting the environment and promoting better health.

- Public transportation reduces annual emissions of the pollutants that create smog—volatile organic compounds (VOCs) and nitrogen oxides (NOx)—by more than 70,000 tons and 27,000 tons respectively. These reductions equal:
  - nearly 50% of all VOCs emitted from the dry cleaning industry, a major source of this pollutant
  - 45% of VOCs emitted from the industrial uses of coal
  - 50% of NOx from the industrial uses of coal
  - more than 33% of the NOx emitted by all domestic oil and gas producers or by the metal processing industry
- The reduced VOC and NOx emissions that result from public transportation use save between $130 million and $200 million a year in regulatory costs.

Public transportation reduces carbon monoxide (CO) emissions by nearly 745,000 tons annually. This equals nearly 75% of the CO emissions by all U.S. chemical manufacturers.

Public transportation reduces emissions of carbon dioxide (CO₂), which contributes to global warming, by more than 7.4 million tons a year.

Public health

People across America are suffering from air polluted to a large degree by vehicle emissions.

- Every summer, high smog levels cause some 159,000 trips to the emergency room, 53,000 hospital admissions and 6,000,000 asthma attacks.
- One out of every three people in the U.S.—including active children, adults with respiratory or cardiovascular disease and the aging population—is at higher risk of experiencing ozone-related health problems.
- For every passenger mile traveled, public transportation produces only a fraction of the harmful pollution of automobile traffic: only 5% as much carbon monoxide, less than 8% as many volatile organic compounds and nearly half as much carbon dioxide and nitrogen oxides.

Energy conservation

The supply of oil is finite. Public transportation is crucial in helping to save energy by using it wisely.

- Americans use more energy for transportation than for any other activity. Nearly 43% of America’s energy resources are used in transportation, compared to industrial use (39%), residential use (11%) and commercial use (7%). Any serious effort to address energy conservation must focus largely on transportation.
- For every passenger mile traveled, public transportation is twice as fuel efficient as private automobiles.
- Public transportation already saves more than 855 million gallons of gasoline or 45 million barrels of oil a year. The number is equivalent to the energy used to heat, cool and operate one-fourth of all American homes annually, or half the energy used to manufacture all computers and electronic equipment in America annually.
In community after community, public transportation is making a real difference in the daily lives of individuals and households.

Improves mobility

Transit systems throughout the U.S. are providing choices and luring riders from their cars. For example, in Denver, nearly 50% of light rail riders previously used cars, and nearly 60% of new riders on the city’s Southwest LRT extension are new to transit. Over 25% of commuters to the city center use transit and light rail—56% ahead of projections. The LRT systems in Denver, Salt Lake City and Dallas have attracted 60%, 43% and 30% more riders, respectively, than projected.

For others, public transportation is a necessity. Recent ridership figures indicate that public transportation is critical for many Americans.

- Of current transit riders, over 20% would not have made the trip without transit, and nearly 70% do not have access to cars at the time their trip is made. One-third have yearly household incomes below $15,000—well below $17,600, the poverty level for a family of four in 2000.

- Nearly 94% of public assistance recipients do not own cars and rely on public transportation.

Reduces road congestion

If all Americans who take transit to work drove alone, they would fill a nine-lane freeway from Boston to Los Angeles.

Public transportation takes cars off the road. According to Maryland DOT’s estimates, that reduction amounts to 60 cars for a full bus, 12 cars for a full van, and up to 200 cars for a full commuter rail car. In St. Louis, a full MetroLink light rail train removes 125 cars from the roads, and the entire system removes 12,500 cars from daily rush-hour traffic.

Benefits for Individuals and Families

30,000 passengers can be carried on a single U.S. subway line in one hour. 10 additional highway lanes would be needed if these riders drove instead.

Reduces travel time

Fewer cars on the road would significantly reduce the commuting time of urban drivers, who, in 1999, spent an average of 36 hours—nearly 5 work days—in traffic delays. In the 68 urban areas it studied, the Texas Transportation Institute found that one-third of daily travel occurs under congested conditions.

State-of-the-art public transportation systems are reducing travel times for the 10 million Americans who use transit each working day, on every mode of travel.

- In Atlanta, travelers and airline workers rely on MARTA rail service for a 16-minute ride from downtown to Hartsfield International Airport.

- San Francisco’s high-speed catamarans have cut travel time for Bay-area commuters by 30% and have posted a 50% increase in ridership.

- In Minneapolis, 155 miles of the freeway system’s bus-only shoulder lanes speed transit riders and improve traffic flow on adjacent lanes.

- In New York City, the 30-year-old Lincoln Tunnel Exclusive Bus Lanes accommodate 1,700 buses and 60,000 passengers a day.
Connects and extends transportation networks

The most successful systems are those that provide easy-access links within and among all forms of modern travel—highway, air, water, bus and train. Across the U.S., multimodal transit systems are reaching greater numbers of people, providing travelers with optimum choices.

- A new downtown bus terminal in Waco, TX, links local, intercity, senior and rural bus services.
- Secaucus Transfer links 11 of Northern New Jersey’s 12 rail lines.
- Bikes-on-buses programs are successfully linking riders with different transportation modes. For example, in the San Francisco area, 2,000 bicyclists commute each day between San Francisco and Silicon Valley on commuter trains equipped with bike racks. In Phoenix, buses equipped with bike racks attract more than 1.5 million bicyclists a year.

When intercity bus service is connected to local public transit through an intermodal terminal, 40% of customers access the service by transit.

Enhances economic opportunity

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, 98% of which is for buying, maintaining and operating cars, the largest source of household debt after mortgages.
- For the poorest households, transportation costs can exceed 35% of income.
- Household transportation costs rise in areas with sprawl and few transportation services.

Savings with public transportation are substantial. Americans living in transit-intensive metropolitan areas save $22 billion annually in transportation costs. Savings add up for everyone: every $10 million invested in public transportation saves more than $15 million, for both highway and transit users. This includes savings of about $1,500 and 200 gallons of gas—per year. Plus, transit availability can reduce the need for additional cars, a yearly expense of between $4,800 and $9,700.

Silicon Valley commuters are excellent examples. Riding the Santa Clara Valley Transit Authority’s Altamont Commuter Express, the daily 80-mile commute by train saves each commuter over $2,500 annually—$2,688 by train compared to $5,282 by car.

Americans who live in transit-intensive areas save $22 billion each year by using public transportation. This savings can buy four-year public college educations for half a million students.
More than ever before, public transportation is an essential element for maintaining a vibrant business community and economic climate. In fact, business leaders are often the driving force behind local efforts to increase public transportation investment and use.

**Generates impressive return on investment**

An investment in public transportation translates into significant increases in business revenues and profits. Every $10 million invested in transit capital projects yields $30 million in business sales, and the same investment in transit operations generates $32 million.

- In St. Louis, a 25-year transit modernization plan is expected to generate a $2.3 billion return in business sales.
- A 20-year “good-repair” strategy in Chicago would yield an anticipated $4.6 billion.

Overall, every dollar of public funds invested in transit returns up to $6 in benefits.

### Expands labor pool, job accessibility and reliability

Employers around the country are taking advantage of the expanded labor pool that public transportation provides. Almost half of the nation’s Fortune 500 companies, representing over $2 trillion in annual revenue, are headquartered in America’s transit-intensive metropolitan areas.

- Motorola’s new cellular phone plant at the end of Chicago’s Metra draws on a large labor pool with Metra access.
- BellSouth in Atlanta is consolidating all of its suburban offices into three downtown locations convenient to Atlanta’s MARTA rail system.
- In Dallas, proximity to DART was cited as a key factor in the location decisions of prominent firms.

In addition to enhancing employee recruitment, businesses tied to public transportation are experiencing more employee reliability and less absenteeism and turnover.

- In Lafayette, IN, businesses in outlying areas help underwrite the cost of employee bus commutes because of the link to willing workers.
- Increased OWL service in Oakland, CA, meets the critical transportation needs of shift workers.

Public assistance agencies are also using public transportation to help more people enter the work force.

- The FTA’s Job Access and Reverse Commute program provides grants to support transportation for thousands.
- Through NJ TRANSIT’s “WorkPass” program, public agencies provide passes and tickets to welfare recipients for work-related travel.
- In Myrtle Beach, SC, Pee Dee RTA, in coordination with the County Department of Social Services, runs a 24-hour-per-day commute service linking rural residents with entry-level jobs in the city.
- The Albuquerque, NM, Transit Department provides reduced-rate, curb-to-curb subscription services for low-income workers whose jobs are not accessible by bus.
Helps the bottom line

Businesses that support public transportation options are realizing substantial savings in several ways. For example:

- Businesses save on employee time lost to delay, accident and injury on the road. In 2000, there were 23.8 million accidents involving passenger cars, light trucks and SUVs; motor vehicle injuries resulted in the loss of $71.5 billion in wages and productivity.

- By relieving roadway congestion, public transportation helps speed freight and commerce. Transit-oriented brownfield redevelopment in New Jersey is focused on reducing freight travel times and truck volumes on local roads.

- The 1,200 firms that have joined NJ TRANSIT’s “BusinessPass” program reduce payroll costs and taxes for both the companies and their employees.

- Businesses in transit-intensive areas save on land required for parking and its associated costs. Where public transportation is a factor, the number of parking spaces required for offices and retail businesses can be reduced by 30% and 50%, respectively—saving between $2,000 and $20,000 per parking space.

- By lowering vehicle emissions, public transportation can reduce the need for higher-cost emissions reductions from stationary plants and equipment.
Increased congestion on the roadways threatens the economic future and the quality of life for urban residents. Even the extensive public transportation networks already serving many major metropolitan regions are being taxed to the limit by demand that exceeds their capacity.

Residents and community leaders are recognizing that fully functional, high-capacity, region-wide public transportation services are essential to keep America moving. Communities that invest in public transportation realize enhanced development and prosperity.

Reduces investment required for expansion of roadway network

Urban rail systems can provide more capacity in a 100-foot right-of-way than a six-lane freeway, which requires a 300-foot right-of-way.

According to a recent study, public transportation use reduces roadway-related costs—traffic enforcement, emergency services, right-of-way acquisition—by an estimated $1 billion to $1.7 billion per year. From 1980 to 1994, it is estimated that Atlanta’s MARTA system saved $2.2 billion by providing motorists with a public transportation alternative.

That’s significant for cities throughout the U.S. The Texas Transportation Institute (TTI) estimates that an average of 64 more lane miles (27 miles of freeway plus 37 miles of principal arterial streets) is needed to meet a single year’s increase in traffic in the cities it studied.

Creates and sustains jobs

Every $1 billion invested in public transportation infrastructure supports approximately 47,500 jobs, proving that transit continues to be an economic engine and job creator. Here are some examples of how public transportation helps create and sustain jobs:

- In San Diego, nearly 7,000 workers would be stranded without transit. Their direct contribution to the local economy is $140 million, and their spending supports an additional 3,200 jobs.
- Riders on southern Illinois’ RIDES program, which serves 11 counties, contribute a combined payroll of over $1 million per year to this rural area.
- Since its inception in 1999, the Guaranteed Ride Home Program run by Outreach, Inc., the Santa Clara Valley (CA) Transportation Authority’s paratransit agency, has enrolled over 1,700 participants and provided more than 47,900 rides to work.
Helps revitalize business districts and activity centers

Developers in places as diverse as northern Virginia, Portland, San Diego, Denver, Chicago, Baltimore, Los Angeles, Dallas, St. Louis, northern New Jersey and New York are investing millions in corporate buildings, sports facilities and entertainment complexes around transit stations.

- Transit villages like those in South Orange, NJ, and North Hollywood, CA, are becoming hubs for new business and cultural activities.
- The Washington Metro has generated nearly $15 billion in surrounding private development. Between 1980 and 1990 alone, 40% of the region's retail and office space was built within walking distance of a Metro station.
- St. Louis' MetroLink system has sparked the construction of the $5.8 million Jackie Joyner Kersee Sports Complex, the $60 million Performing Arts Center, and the $266 million Convention Center Hotel. The Busch Stadium station provides access to the $646 million Ballpark Village, the largest single development in St. Louis' history.
- State-of-the-art regional public transportation systems in Atlanta and Salt Lake City were essential to those cities' successful Olympics bids.

Helps increase tax base and public revenues

The $32 billion U.S. public transportation industry generates up to a 6-to-1 net return on investment—which translates into higher revenues for cities and states.

- Between 1994 and 1998, the increase in the taxable value of properties located near Dallas' DART rail stations was 25% more than elsewhere in the metropolitan area.
- Through 2010, Washington's Metrorail system will generate $2.1 billion in tax revenues for the Commonwealth of Virginia, exceeding the amount of projected public investment.
Public transportation produces savings in public programs and services such as human services, health care and education.

**Roadway-related costs**
A recent study estimates that transit use reduces roadway-related costs—traffic enforcement, emergency services, right-of-way acquisition—by as much as $1 billion to $1.7 billion per year.

**Human services**
According to a recent study, savings to social programs from transit use may be as high as $1.3 billion to $2 billion per year. Human services-oriented transit programs can be found in communities around the country.

- Clallam Transit in Port Angeles, WA, coordinates services with 14 other agencies to reduce transportation costs of public programs.
- CitiLink in Ft. Wayne, IN, joined a consortium of human service agencies in the Community Transportation Network to meet local needs at a lower cost.
- The Los Angeles LAMTA underwrites transit travel and taxi vouchers for clients of 600 Los Angeles social service agencies.

**Health care**
The availability of public transportation can reduce costly duplication in transportation services. This helps agencies avoid medical institutionalization of the indigent and associated public costs, reduce demand for more expensive and oversubscribed paratransit services, provide an option to the costly use of ambulance and EMS services, and relieve other public agencies of transportation responsibility, thereby increasing their productivity.

- In 1998, Medicare paid for nearly 4.8 million ambulance trips at an average one-way cost of almost $525 per trip. The same trip on public transportation would be much less. The average one-way trip cost for rural public transportation providers is less than $10.
- In Florida, the use of Metro Dade transit passes saves the Dade County Medicaid agency over $500,000 a month and gives Medicaid clients unlimited travel for $1 a month.

Public transportation reduces health-care costs in other ways as well. Maryland estimates that public transportation saves $70 million annually in air pollution-related health costs by reducing vehicle emissions.

**Education**
Approximately 12% of public transportation users are en route to schools of various types; and school districts, educators and concerned parents are finding that greater reliance on expanded public transportation services helps improve educational systems. Across the country, “Unlimited Access” transit pass programs at 35 universities provide free, system-wide service to 825,000 college students, faculty and staff, expanding access, reducing auto-related expenditures, and saving universities millions.

- Salt Lake City, UT’s University TRAX LRT line serves 46,000 students and faculty, relieving campus congestion and reducing university parking costs.
- The Worcester, MA, Regional Transit Authority connects 26 training facilities and two GED test centers, as well as 26 major employers and 24 child-care facilities.
- In Duluth, MN, the U-Pass program allows access to the TA system, easing parking costs and congestion at three area colleges and universities.

In addition, many public transportation agencies and educational institutions—in areas such as Waukegan, IL, Orlando, FL, Syracuse and Albany, NY, Madison, WI, and Flint, MI—have established cost-saving partnerships.
More access for children and young adults

The need for increased access and mobility also ties into the emerging lifestyle needs of children and young adults. As their activities become more extensive and widespread, public transportation plays an increasingly important role in linking young Americans to the larger community.

Mobility for the aging population

2020

By 2020, 40% of the U.S. population will be senior citizens; many will be unable to drive.

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Supports diversity

In a world with fewer and fewer boundaries, Americans’ travel needs are increasingly diverse. Transit services are becoming more agile and responsive, providing extraordinary value and benefit for a wide range of lifestyles.

A vital link for citizens with disabilities

By 2020, 40% of the U.S. population will be older adults; many will be unable to drive. In fact, one-fourth of today’s 75+ age group does not drive. Meeting the transportation needs of seniors is a major community objective as well as a national goal. Public transportation and related travel options represent a lifeline for older adults, linking them with family, friends and a changing society. Mini-buses in Miami, for example, serve areas with unique geography and character, connecting residents with critical neighborhood facilities and services.

Over 54 million Americans have disabilities. Nearly 35% say they are uninvolved in their communities, and the lack of effective transportation options contributes to an unemployment rate of approximately 75%.

Nearly 85% of today’s public transportation vehicles are accessible to people with disabilities. However, to ensure that disabled persons remain actively involved in their communities, maintain productive roles in the economy,
The broad-based benefits of public transportation are most obvious in metropolitan America. However, public transportation is equally important to the nation’s small urban communities and rural areas. In the last three years, ridership for small urban and rural public transportation systems in all 50 states has jumped 15%.

Preserving small urban and rural communities

Small urban communities throughout the country are symbols of fundamental American values—a hard work ethic, self-reliance, mutual support, creativity, innovation—as well as emerging focal points for today’s economy. In light of the fact that nearly 10% of all households in small urban areas are without a car, the freedom, mobility and access that public transportation services provide in these settings are key ingredients in sustaining their character.

- In Des Moines, IA, the MTA’s downtown loop shuttle and an 1,800-space park-and-ride lot have increased mobility, reduced congestion and enhanced access to the downtown area.
- The Huntington, WV, downtown Intermodal Transportation Facility combines access to local and interstate buses, taxis, bicycles and private cars.
- In South Carolina, the 43 member agencies of the Chesterfield County Coordinating Council share vehicles on fixed-route and dial-a-ride services and allow adults to ride school buses.
- In Lebanon, NH, 65% of the riders on Advance Transit services are commuters going to work.

Providing access for rural areas

Public transportation is equally important to America’s rural heartland, where 40% of residents have no access to public transportation services and another 28% have negligible access. Transportation service is vital for rural America’s 30 million non-drivers, who include senior citizens, low-income families, and people with disabilities.

- In rural Illinois, RIDES coordinates transportation needs for clients of 80 agencies to meet job, service and training needs.
- The Sweetwater Transit Authority in Wyoming helps 44,000 residents in a 10,000-square-mile service area reach work sites.
- In the Robertsdale, AL, region, the Baldwin Rural Area Transit System (BRATS) provides more than 400,000 trips per year.
Many of the benefits of public transportation are economic, both direct and indirect, with a real dollar value.

In recent years, government and private-sector groups have formed true partnerships to fund public transportation—partnerships in which investment decisions, such as transit-oriented developments that create livable communities, are increasingly based on a clear sense of the benefits that can be realized.

Successful in getting new-start systems off the ground, as well as in funding expansions and upgrades, these investments have taken many forms, including:

- More direct public funding for transit and related improvements by federal, state and local agencies
- More public funding for other public services—education, health, human services—to support partnerships with public transportation agencies
- The leveraging of private funds to support public transit facilities, services and surrounding development
- The introduction of effective incentives for shifting public and private investment to transit
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