Myths & Facts about Rail Transit

With rare exceptions, rail transit is a costly and foolish investment that is more about pork barrel than it is about moving people.

Myths & Facts

The Capacity Myth: A single rail line can carry as many people as an eight-lane freeway.

The Reality: No rail system outside of New York City carries as many people as one freeway lane.

While few rail lines actually have a capacity anywhere close to an eight-lane freeway, capacity isn't as important as actual use. New York subway lines are the only rail lines in the country that carry more than one freeway lane's volume of passenger traffic.

The Congestion Myth: Rail transit can greatly reduce congestion.

The Reality: Outside of New York and a few other cities, rail transit carries too few people to noticeably reduce congestion.

New York is the only urban area where transit has more than a 10 percent share of urban travel, and transit has more than a 3 percent share in only five other areas. Even if rail transit could increase transit's share of travel, an increase from, say, 1.5 to 2.0 percent is simply not significant. In most urban areas, miles of daily driving are growing so fast that all the congestion relief provided by a billion-dollar rail project will be consumed by growth in a few weeks to a few months.

The Rush-Hour Myth: Rail transit can cost-effectively reduce rush-hour congestion.

The Reality: While a few rail-transit lines may have had a marginal effect on rush-hour congestion, the cost is exorbitant. The average light-rail line under construction or in planning stages today costs $25 million per mile ($50 million per mile in both directions). Heavy rail costs more than twice as much.

By comparison, the average lane mile of freeway costs only about $5 to $10 million. Since freeway lanes carry far more people than any rail line outside of New York, they are much more cost effective. Running express buses on high-occupancy vehicle or high-occupancy/toll lanes will carry more people at a far lower cost than rail.

The Operating-Cost Myth: Rails cost less to operate than buses.

The Reality: Almost all rail transit systems cost more to operate than buses running on routes in comparable corridors.

Rail transit sometimes costs less to operate than the average bus route in a bus system. But rail lines are usually built along the most popular travel corridors, where costs per rider are lowest. The bus lines that rail replaces almost always cost less to operate than the rail lines that replace them. Even the average bus lines cost less to operate per ride than heavy-rail systems in Baltimore, Chicago, and Miami, and less than light-rail systems in Dallas, Los Angeles, Pittsburgh, and San Francisco.

The Speed Myth: Rail lines must be rebuilt and equipment replaced every twenty to thirty years. Reconstruction often costs as much as the original investment.

The Reality: Rails cost less to operate than buses.

The Eternity Myth: Rail transit is so valuable that it can run on schedules competitive with rail. Such bus routes can run on existing roads and cost far less and take less time to start than new rail lines, and cost less to operate as well.

The Rift-Hour Myth: Rail transit can cost-effectively reduce rush-hour congestion.

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The Reality
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in other rail cities.

T he Balan ced-Transportation Myth: R ail transit needs more subsidies to make up for historic subsidies to the automobile.
T he Reality: Transit subsidies have greatly exceeded highway subsidies for more than thirty years.

H ighways and local streets receive some subsidies. But they are heavily used, so these subsidies average just 0.4 cents per passenger mile. By comparison, transit subsidies now exceed 50 cents per passenger mile, and have been significantly greater than highway subsidies for more than three decades.

San Jose is spending 80 percent of its transportation capital funds on transit, which carries 1 percent of regional travel. M inneapolis-St. Paul plans to spend 70 percent of its capital funds to transit, which also carries just 1 percent of travel. See ti.org/ vaupdate24.html for similar disparities in other rail cities.

T he Under-Budget Myth: M ost rail lines are built under budget and carry more riders than anticipated.
T he Reality: U.S. rail transit construction has gone an average of 41 percent over budget.

Transit agencies often make low initial cost estimates and high ridership estimates. A fter they gain approval to build, they revise cost estimates upward and reduce ridership projections. W hen the line opens, they compare final costs and ridership against the later estimates, not the ones made to get approval.

A recent article in the Journal of the American Planning Association found that U.S. rail projects cost an average of 41 percent more than the original projections, while highway projects average only 8 percent over budget (see www.planning.org/japa/pdf/ JAPA Flyvbjerg.pdf). Ridership in many rail transit projects is less than half the original projections.

T he Snob Myth: People won't ride a bus, so we need rails to get them out of their cars.
T he Reality: Fast, frequent bus service will attract as many riders as rail transit.

T he most important job of urban transit systems is to provide mobility to people who can't drive. Trying to get people out of their cars with rail transit is expensive, fruitless, and detracts from the first job. M ost rail projects cost $10 to $30 (and sometimes as much as $100) for every new ride, that is, every ride that did not previously use transit. A new rail commuter who does 250 round trips a year costs taxpayers $5,000 to $15,000 (occasionally up to $50,000) a year.

To pay the high cost of rail, especially when rail projects go over budget, many transit agencies raise bus fares and/or cut bus service. Because many rail lines are aimed at white, middle-class riders and many bus routes serve minority and low-income riders, this has created serious problems in Los Angeles, San Jose, and other rail cities.

T he Air Pollution Myth: R ail transit reduces air pollution.
T he Reality: R ail transit has an insignificant effect on pollution.

R ail transit carries so few people that it is an extremely expensive way to reduce pollution (see ntl.bts.gov/ D O C S / tranchal.html). In fact, it often increases pollution. Cars pollute most in congested traffic. W here light-rail transit shares the road with cars, the congestion it creates can contribute to pollution. Vermont recently cancelled an experimental commuter train when it found that the Diesel locomotives pulling the train polluted more than the cars it took off the road.

T he Redevelopment Myth: R ail transit leads to economic development.
T he Reality: R ail transit rarely generates any additional development.

"Urban rail transit investments rarely create new growth," says a federally funded study, "but more typically redistribute growth that would have taken place without the investment" (see www.tcrponline.org/ bin/ doc-distr.cgi/ T CRP%20OR%20RD%2007.pdf, p. 3). O nce this redistribution has been to downtowns, so downtown-property owners strongly favor rail transit.

O utside of downtowns, high-density, transit-oriented developments are difficult to market, so developers won’t build them without significant subsidies. Portland, Oregon, has given developers hundreds of millions of dollars in subsidies in the form of tax breaks, infrastructure support, and direct grants. O nce built, so-called transit-oriented developments merely add to congestion because the vast majority of trips made from the developments are still by automobile.

T he Safety Myth: R ail transit is safer than highways.
T he Reality: L ight rail is a deadly form of urban travel.

Separated from autos and pedestrians, heavy rail is one of the safest forms of travel. But light rail, which operates in the streets with cars and pedestrians, is one of the most dangerous. C ommuter rail is in between. O ver the past decade, light rail has killed about 11 people per billion passenger miles, commuter rail and buses 8, and heavy rail 4. Freeways are about 4 to 5 and other roads and streets about 8.

T he Choice Myth: R ail transit gives people choices.
T he Reality: G overnment officials should be more concerned about spending taxpayer dollars wisely than with giving people needlessly expensive choices.

R ail advocates repeat the choice mantra as if there were some virtue in giving people choices between a 2-cent road subsidy, a $2 bus subsidy, and a $20 rail subsidy. I mproved bus services can provide all the alternatives to autos that people need at a far lower cost than rails.