TECHNOLOGY-BASED TRANSIT IMPROVEMENTS

COST

TIME IMMEDIATE

IMPACT
STATE
REGIONAL
LOCAL
CORRIDOR
SPOT

WHO
PUBLIC/PRIVATE

HURDLES
COST AND IMPLEMENTATION SPEED

More Information: tti.tamu.edu/policy/how-to-fix-congestion

Description

Technology-based transit improvements are broad in scope and ever-changing. The newest improvements include:

- Transit apps for smartphones and tablets.
- Smart transit stops that display relevant and timely service information.
- Fare payment methods.
- Alternative fuels for transit vehicles.

Less obvious technological advancements take place behind the scenes. Route planning, maintenance, fare collection/processing, data collection, and customer service benefit from technology. Technologies that improve route planning, fare collection/processing, and information distribution to riders have the greatest potential to increase transit use and decrease congestion.

Target Market

All modes of transit benefit from technological evolution. To decrease congestion, transit services that operate in peak times and have consistently high ridership are the best candidates for technological improvements.

How Will This Help?

- **Improves vehicle loading times.** Technologies that reduce the time it takes to pay fares make boarding more efficient.
- **Reduces cars on congested roads.** On-demand information and services that are more responsive to customer needs increase transit ridership and reduce the number of single-occupancy vehicles.
- **Reduces costs and environmental impacts** by using alternative fuels in transit vehicles.

Implementation Issues

Cost
Large-scale implementation of complex technological systems can be expensive.

Public Perception/Acceptance
Riders and other stakeholders have varied opinions and can be resistant to change. Transit technological improvements usually require public education, outreach, and decision-maker approval.

Speed
Technological advancements occur much more swiftly than changes within the transit industry.

SUCCESS STORIES

Hong Kong's smart card, Octopus, is accepted on buses, rail vehicles, and ferries.

95%
95% of Hong Kong's population used Octopus—that's over **10 million uses per day** in 2010.

Throughout the United States, **NextBus presents real-time transit information to passengers** and **provides performance information to transit operators.**

Project Champion
As the transit industry embraces technology, a project champion may be valuable in garnering financial and public support for implementing a new system.