

The Ideal Public Transportation Experience

INTRODUCTION

Car-centric design dominates urban planning, yet its inefficiencies are myriad. Dependence on automobiles harms the environment and contributes to climate change, wastes time, and creates a financial

and emotional burden for the automobile owner. Design solutions that focus on flexibility, usability, compatibility, and safety exist in public transportation.

INSIGHTS

Downsides of Automotive Culture

CAR-CENTRIC DESIGN NEGATES PUBLIC TRANSPORTATION

Access to public transportation is exceedingly limited in the United States. In total, 45% of Americans do not have access to mass transit. Further, 70% of all mass transit commuters live in the country's seven largest metropolitan areas. Outside of dense urban communities, reliance on automobiles is essential — and yet 1.6 million rural households don't own a vehicle, an effect of poverty.

CAR OWNERSHIP IS A FINANCIAL BURDEN

The average American spends more than \$10,000 per year — nearly \$900 per month — to own and service a new motor vehicle. Additionally, Americans owe \$1.4 trillion on auto loans,

contributing to individual financial hardship.

CAR-CENTRIC DESIGN IS CLIMATOLOGICALLY AND EMOTIONALLY UNSOUND

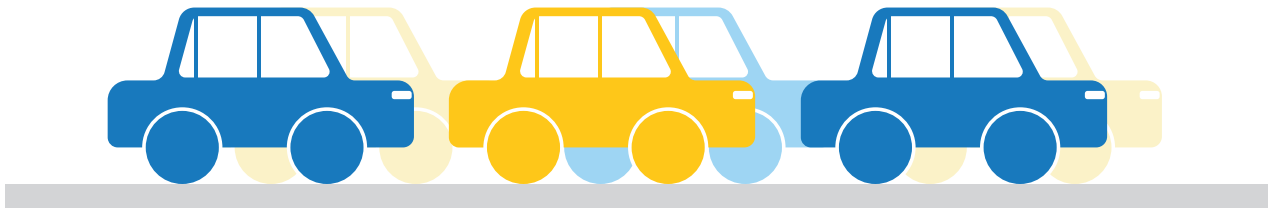
Recent government data shows that the average American spends roughly 10 days each year in traffic. Road congestion contributes to 3.8 billion gallons of wasted gasoline. Ecologically harmful and expensive, commuting by car ranks among the least favorite daily activities for most Americans.

MOTOR VEHICLE TRANSPORTATION IS LESS SAFE THAN PUBLIC TRANSPORTATION

Car accidents are a leading cause of death in the United States for persons aged 1-54. It is 50 times safer to ride a bus or train than a car.

1.6 million
rural households do
not own a vehicle

10 days
spent idling in traffic per
year, on average



3.8 billion
gallons of gas used idling
in traffic each year

\$10,728
annual cost to service and
maintain a new vehicle

BENEFITS OF PUBLIC TRANSPORTATION

Research into the ideal public transportation experience yielded insights into how mass transit can be best designed for users.

IMPROVES PRODUCTIVITY, EFFICIENCY, AND RELIABILITY

Commuters value the ability of a transportation system to provide quality service outside established routines, including emergencies and other special circumstances. The efficiency and reliability of the service directly reflects users' feelings of productivity.

SUPPLIES STABILITY, SERENITY, AND SAFETY

An intuitive public transportation system constantly conveys information regarding its status. Moreover, riders prize personal space

and safety. Straphangers are much more likely to interact with rapid transit if it contains these attributes.

SOCIAL CONNECTIVITY

Public transportation can elevate social infrastructure, allowing commuters to meet others outside their usual networks.

ECONOMIC ADVANTAGES

A well-designed public transportation system unites the workforce and businesses to create more job opportunities. Consumers reach and permeate more places, resulting in increased foot traffic directly leading to greater profits. When transportation systems provide upward economic mobility, a cycle is created where people land better jobs alongside the growth of the businesses and the economy.

Commuting by car ranks among Americans' least favorite daily activities.

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50x

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70%

of mass transit commuters live in seven largest metropolitan areas



CONCLUSION

Public transportation presents numerous variables that prevent it from suiting an entire populace. However, a successful mass transit system should adopt the following design solutions.

INCREASE COMPATIBILITY

Multimodal compatibility — bringing a bicycle on a train, for instance — increases user efficiency, convenience, and cost-effectiveness, as they can customize their own route. In addition, this lowers the restrictiveness associated with public transportation, providing freedom for riders to choose the modes of transportation best suited to their needs.

DIGITAL SOLUTIONS

Apps, websites, and text-based alerts serve to provide a dialogue between a mass transit system

and its ridership. Increased digital connectivity allows riders to communicate with the system by suggesting new stops and alternate routes, while the system could disseminate alerts concerning everything from potential delays to congestion warnings.

VISIBILITY

Abundant lighting, guards, and a prominent security presence are required to earn the trust of riders.

COMFORT

Personal space is paramount for successful public transportation. Appropriate density leads to positive social interactions, an agreeable experience, and also discourages criminal activity.

The Ideal Public Transportation Experience was informed by contextual research conducted by Alexander Cortez (industrial design), Zachary Hoedl (graphic design), and Jeronimo Reyes (industrial design).

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