



Vision Action Plan: Literature Review and Survey

A study conducted for the Florida Department of Transportation by Jodi Godfrey, Sara Hendricks, Divyamitra Mishra and Tung Vo of



2022 FPTA Annual Conference
Monday, September 19th, 3:15 – 4:30 PM



**PUBLIC
TRANSIT**

Agenda

- **Project Objectives**
- **Methodology**
- **Literature review findings**
- **Survey findings**
- **Conclusions**



Project Objectives

- Identify public transportation pilots and partnerships that have successfully improved mobility using innovative approaches
- Identify key characteristics that attract current public transportation users to choose public transportation as their mode of choice
- Identify key characteristics that deter current non-public transportation users from choosing to use public transportation as their mode choice

Methodology

- **Literature review to identify public transportation pilots and partnerships that have successfully improved mobility using innovative approaches**
- **Developed and disseminated survey to over 2,000 Floridians to:**
 - Identify key characteristics that attract current public transportation users to choose public transportation as their mode of choice
 - Identify key characteristics that deter current non-public transportation users from choosing to use public transportation as their mode choice

Literature Review Criteria for Inclusion

- Last five years
- Availability of rigorous evaluation component
- Relevant to Florida in some way
- Technology or service model innovations
- Successful partnerships
- Lessons learned that are replicable



**PUBLIC
TRANSIT**

Improved Mobility and Increased Ridership Highlights (prior to Coronavirus pandemic)

- **PSTA P4MOD:** Increases in number of users per month, average number of trips per individual per month, trips for health care, restaurants, social, shopping, errands, greater departure time flexibility
- **TBARTA's adaptive TNC** pilot served cross-county trips for riders who reported would not have made the trip at all
- **Stanford University's Fair Value Commuting:** Increased transit mode share from 8 percent to 31 percent
- **Valley Metro Phoenix, AZ, Mobility Platform** demonstrated an increase in frequency of trips taken by bus and rail
- **Atlanta Regional Commission's Rides to Wellness:** Reported reductions in missed doctor appointments, increased transit trip making
- **Dallas Area Rapid Transit's FMLM GoLink Microtransit** riders reported 22 percent would have driven a car, 11 percent would not have taken the trip
- **RTA Pima County, AZ adaptive mobility service** became lifeline to participants with no other travel options



**PUBLIC
TRANSIT**

Targeted Transit Market Segments for Innovative Mobility Services

- **Commuters associated with large employers**
- **Cross-county commuters**
- **Seniors**
- **Low-income households**
- **Customers without smartphones**
- **Customers without bank accounts or credit**
- **Social services clients**
- **Veterans**
- **Persons with disabilities**
- **Suburban low density communities**
- **Rural communities**
- **Geographically isolated urban neighborhoods**
- **Persons seeking employment**
- **Teens**
- **University students**
- **Late night shift workers**
- **Tourists**
- **Refugee and immigrant populations**

Partnerships are Expanding

- **Government transportation agencies**
- **Regional transportation authorities**
- **Neighboring transit agencies**
- **Special services districts**
- **Community redevelopment agencies, community improvement foundations**
- **Transportation management organizations**
- **Employers**
- **Universities**
- **Professional organizations**
- **Private third party providers: Taxi, TNCs, Adaptive TNCs, Vanpool, Bus Paratransit, TD providers**
- **Private vendors: IT support, app developers, payment processors**
- **Veterans Administration**
- **Healthcare providers NEMT**
- **Managed care organizations**
- **State departments of Medicaid**
- **Human services providers**
- **Housing resources programs**
- **Advocacy groups**

Mobile Applications Take Center Stage

- Real-time trip planning
- Multimodal trip itineraries
- Automated vehicle locator
- Schedule integration across modes and across service providers
- Fare integration across modes, jurisdictions and service providers
- Dynamic ridematching
- On-demand ride reservation
- Ride scheduling
- Trip logging, gamification and rewards delivery
- Time-stamped trip documentation for Medicaid transit benefits
- Platform for data generation, sharing, management, reporting
- APIs with marketing to collect customer feedback and target market segments
- APIs to connect multiple service providers with single payment solution
- Supports account-based fare systems
- Parking availability, reservation, payment
- Transit benefit integration with employer payroll for pre-tax transit subsidy
- Service alerts

App Challenges Requiring Continued Collaboration

- **Maintaining in-house expertise**
- **Continuing staff technical and customer service training**
- **App integration with private providers**
- **Trip-level data sharing for real-time service adjustments, reporting, planning**
- **Uniform data, by type and formats across providers**
- **Need to maintain options for customers without smartphones or bank accounts**
- **Discount fares linked to eligibility information**
- **Data security features compatible with project partners to protect customer privacy**

Other Challenges Requiring Continued Collaboration

- **TNC driver background checks**
- **TNC vehicle safety and maintenance**
- **Lack of TNC WAVs**
- **Insurance for wheelchair accessible vehicles**
- **Rural FMLM bike share, scooter share**
- **Rural area TNC availability**
- **Rural area wayfinding**
- **Up-to-date information on customer eligibility for subsidies**
- **Transit service evaluation data needs**
- **Uniform performance metrics across providers**

Literature Review Findings

- **Successful mobility innovations target defined customer markets with compelling unfulfilled travel need**
- **Microtransit can provide access to fixed route systems for residents in rural and low-density suburban areas (St. Lucie County, Sarasota)**
- **Mobility on Demand to targeted areas demonstrate cost efficiencies, increased coverage, increased trip making, reduced wait time, reduced travel time, increased customer satisfaction**
- **Fare Capping policies can be tailored to target deeper discounts for regular riders and vulnerable groups, and incentivize riders to take more transit trips**



Literature Review Findings

- Expanded partnerships with third party providers introduce uncertainty and the need for transit agency adaptability
- Expanded partnerships leverage resources and also introduce interdependencies
- MaaS full integration across modes, fares, and providers requires continued work
- Implementing mobility innovations takes longer than anticipated, requires continually updating in-house skill sets
- Partnering with market research firms secures sufficient user participation and feedback for evaluation and improvement



**PUBLIC
TRANSIT**

Survey findings

- **Examined 4 types of trips:**

- Commute
- Grocery
- Recreational
- Medical

- **Cross examined responses by:**

- Age
- Household income
- Transit availability

- **Public transit attitudes:**

- Willingness to walk/bike to transit
- Comfort using transit
- Feelings of transit reliability

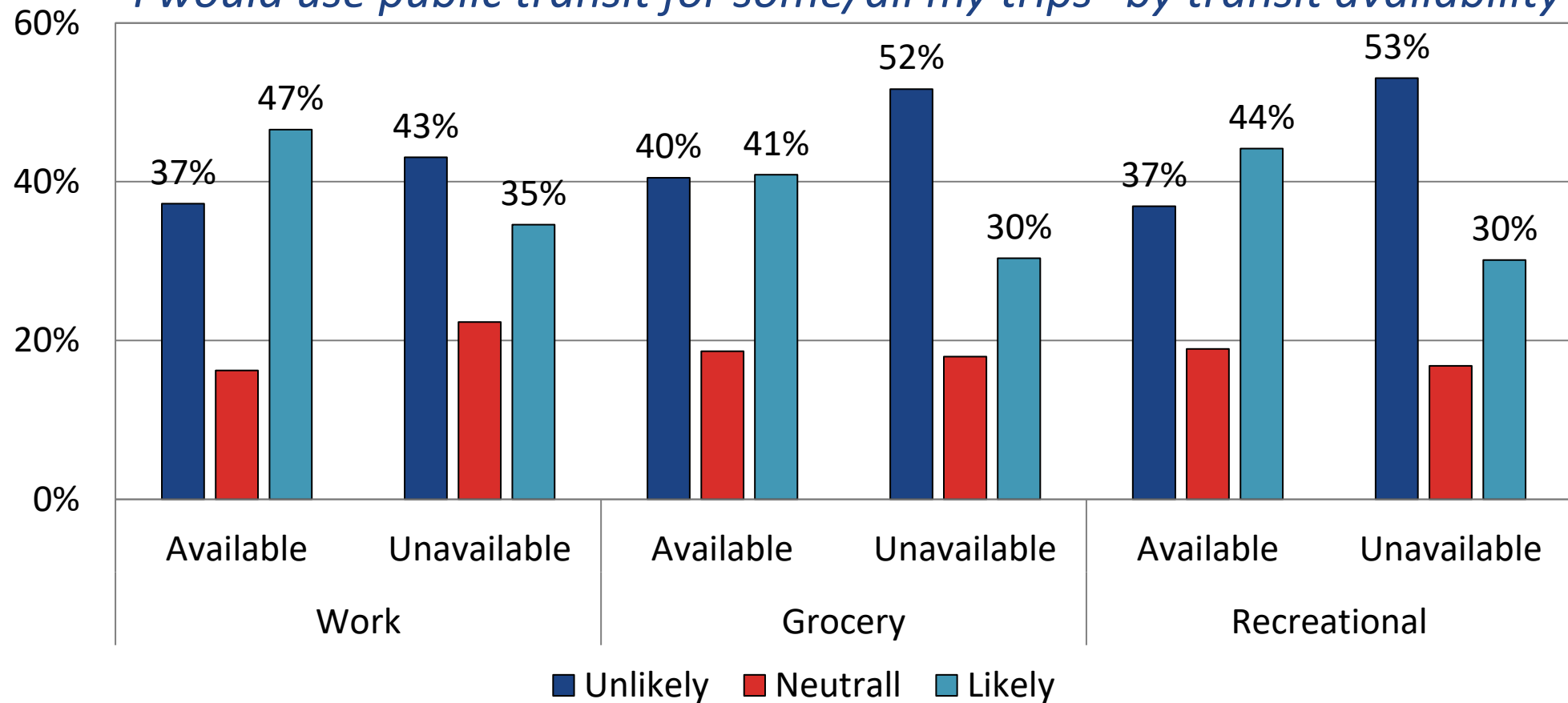
- **Public transit attributes:**

- Attractive features for current users
- Attractive features for non-users
- Discouraged features for users
- Discouraged features for non-users

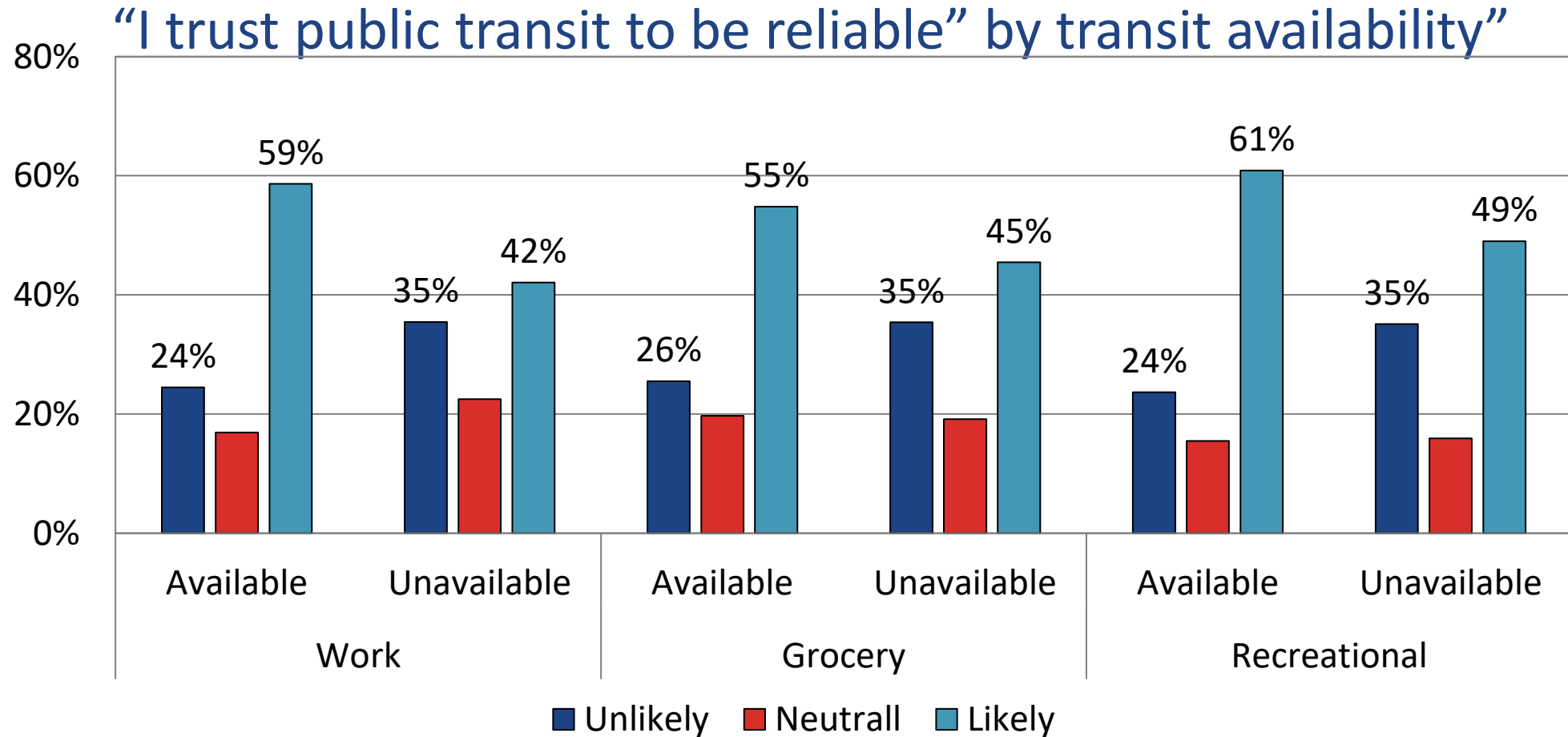


Survey findings cont'd

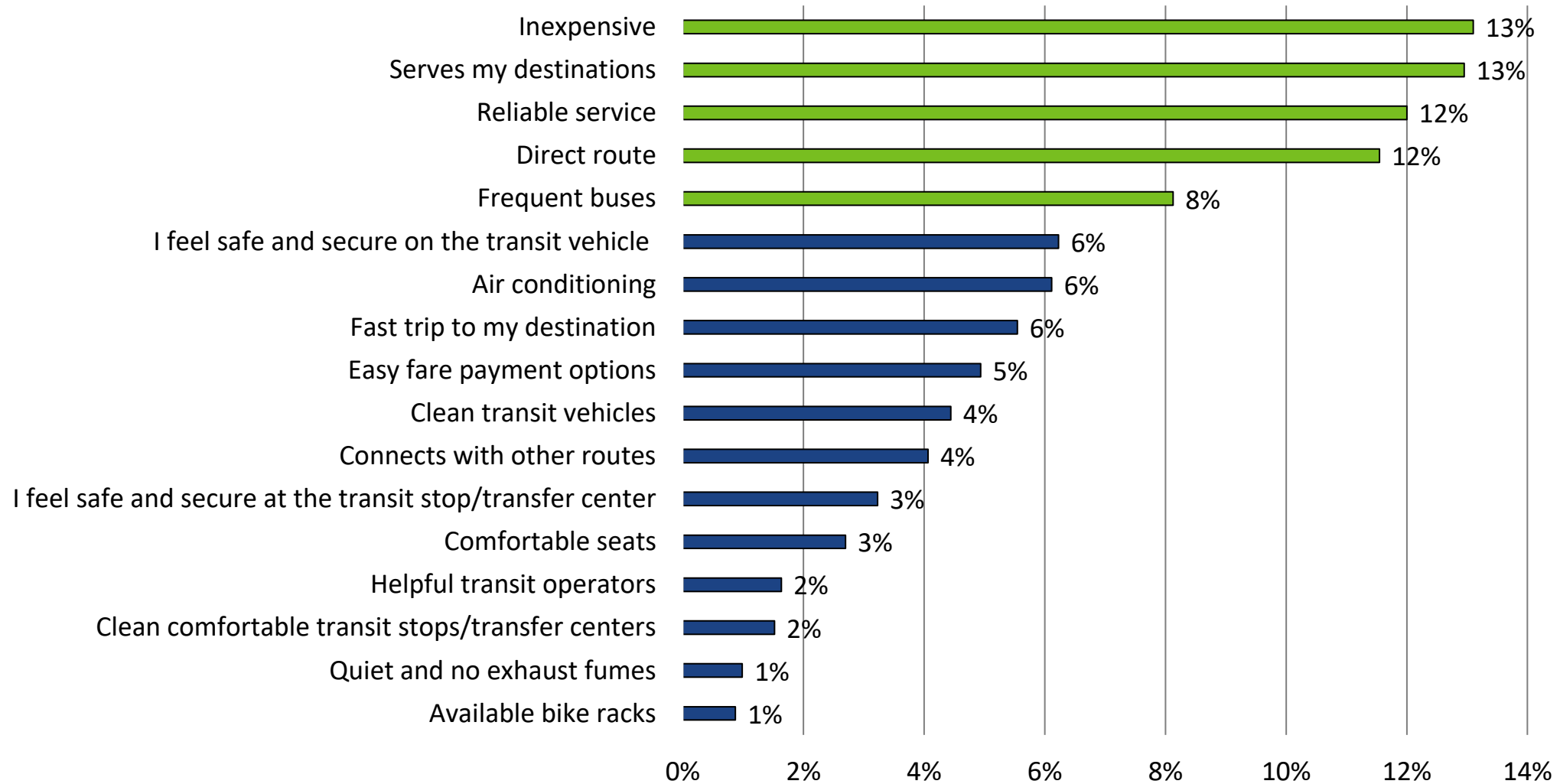
"I would use public transit for some/all my trips" by transit availability



Survey findings cont'd

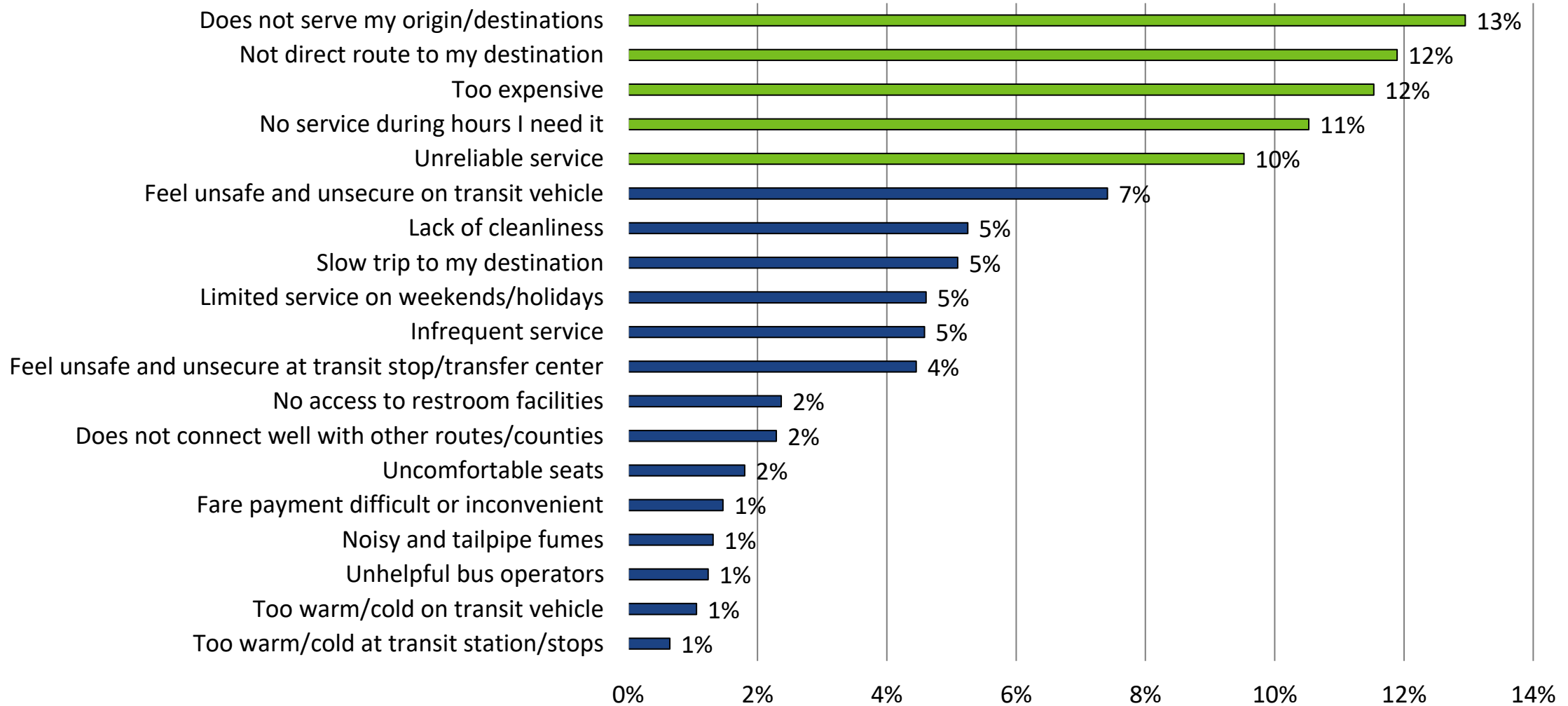


Attractive features of transit to current transit users



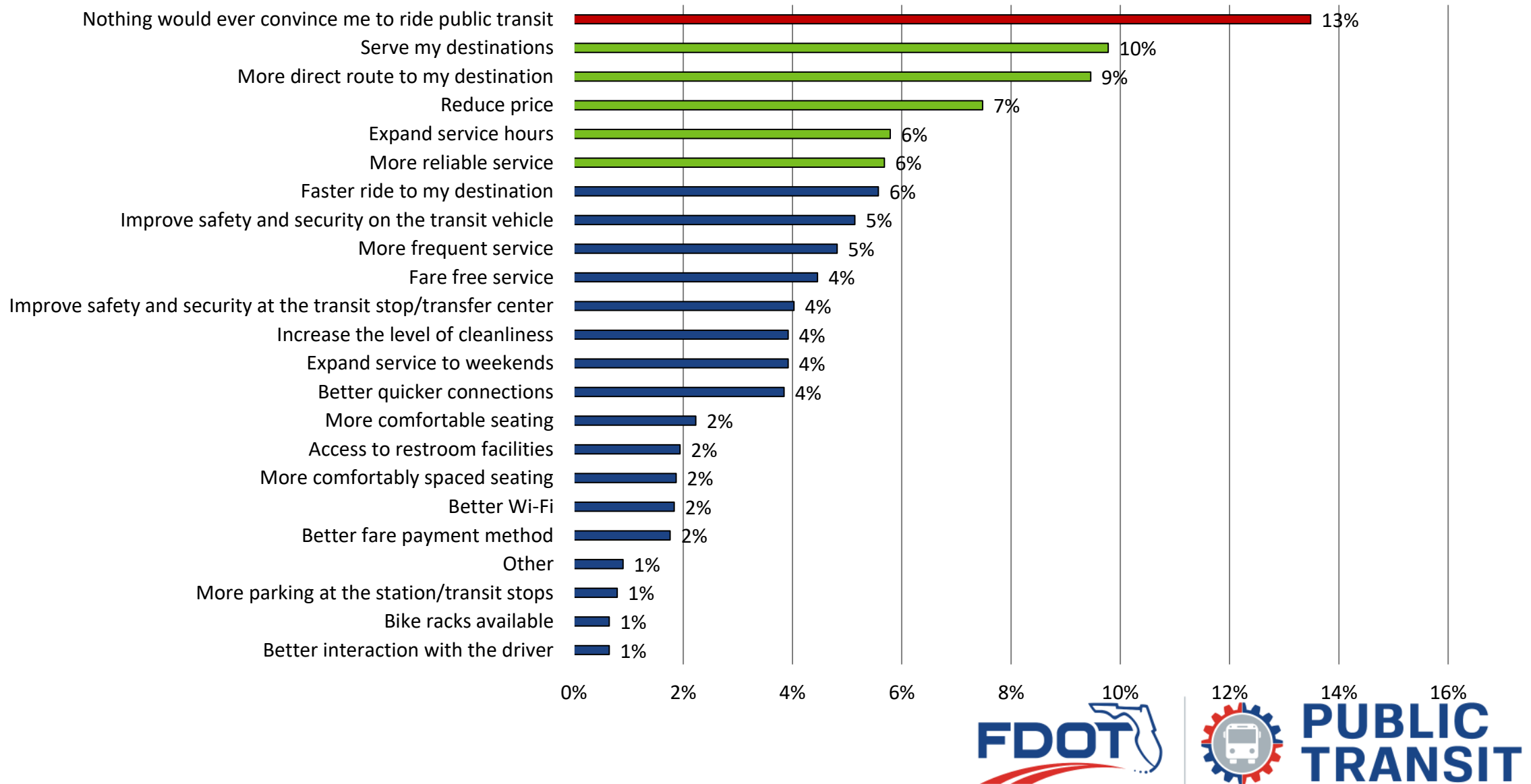
**PUBLIC
TRANSIT**

Deterrent features of transit to current non-transit users



**PUBLIC
TRANSIT**

Transit features that would convince current non-transit users to use transit



Conclusions

- **Knowing transit is available and the areas transit serves, increases the likelihood to use transit on any trip type**
- **Willingness to bike/walk to use transit is highest for recreational trips where transit is known to be available**
- **Perceptions of lack of comfort on transit are higher for non-users than for users**
- **Those that know transit is available show less trust in transit reliability and transit's ability to run on schedule than non-users**
- **Current transit users would ride transit more if less transfers were needed**
- **Most respondents indicated that they would ride transit bus more if it operated in dedicated lanes**



Conclusions

- **Users are most attracted to the inexpensive nature of transit, the ability to serve desired destinations, the reliability, direct routes, and frequent buses.**
- **Non-users are similar to users, but notably ranked feelings of safety and security while on the vehicle as important.**
- **Non-users of transit indicate reasons such as not serving origin/destination, no direct routes, too expensive, not available at the time of day when needed, and unreliability as reasons for not using transit.**
- **Non-users mentioned that direct service to desired destinations, at a reduced price, reliably available over extended hours would entice them to use transit.**



**PUBLIC
TRANSIT**

Thank You!

Jodi Godfrey

Senior Research Associate

Center for Urban Transportation Research

University of South Florida

Jodis@usf.edu

Sara J. Hendricks, AICP, TDM-CP

Senior Research Associate

Center for Urban Transportation Research

University of South Florida

Hendrick@usf.edu



**PUBLIC
TRANSIT**