

The Road to Tempe's 20-Minute City: Rapid Bus Transit



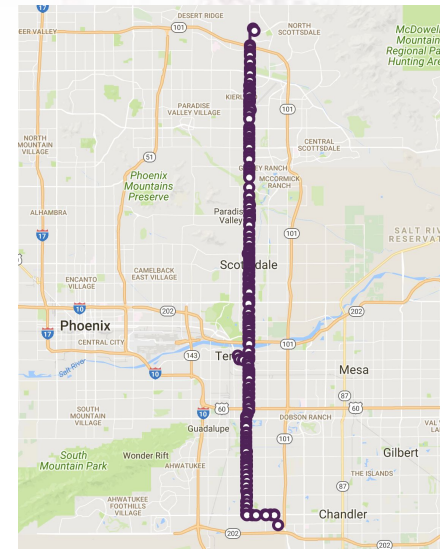
Introduction

- Tempe's initiative to create the 20-minute city
- Importance of increasing North-South connectivity
- Tempe's 2040 Transportation Plan includes a BRT to connect cities of Scottsdale, Tempe, and Chandler
- Our team's representation of the 72 line and it's riders, including well-implemented examples of BRT from other cities across the globe



Representing the 72

- Line runs North-South from Thompson Peak Parkway to the Chandler Fashion Center
- Runs 7 days a week with 115 stops each direction
- 52.9% of riders fall into the age demographic of 19-30 years of age
- 40.2% of riders do not have another form of transportation
- Largest complaint riders made was the lack of punctuality during rush hour

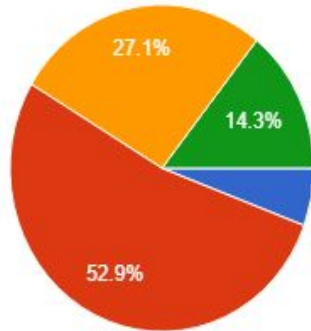




Representing the 72 - Cont'd

Age

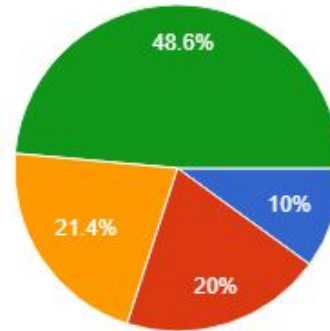
70 responses



- 1-18
- 19-30
- 31-50
- 51+

How often do you use public transit?

70 responses



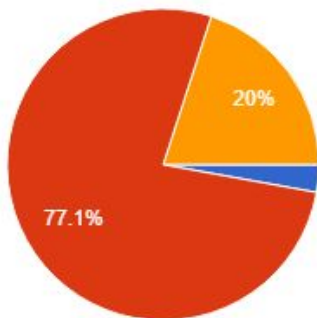
- almost never
- once or twice a week
- for work (5 days a week)
- every day



Representing the 72 - Cont'd

Do you feel as if the current bus routes are confusing?

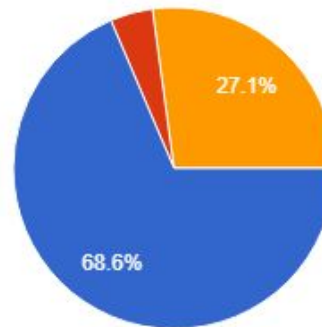
70 responses



● Yes
● No
● Somewhat

Do you feel comfortable riding public transit?

70 responses



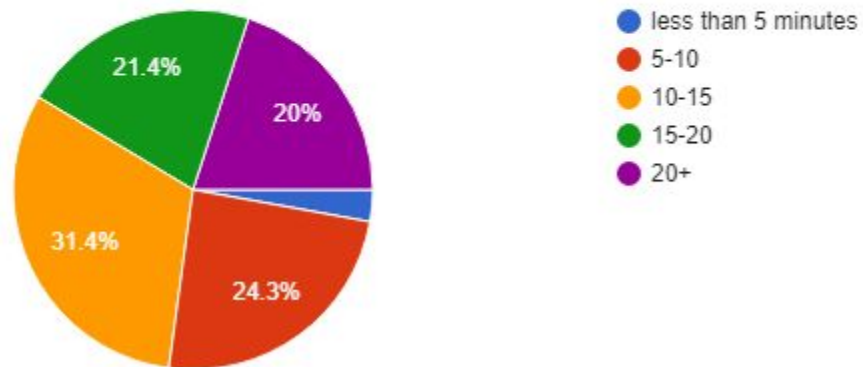
● Yes
● No
● Somewhat



Representing the 72 - Cont'd

How long did you usually wait for the bus?

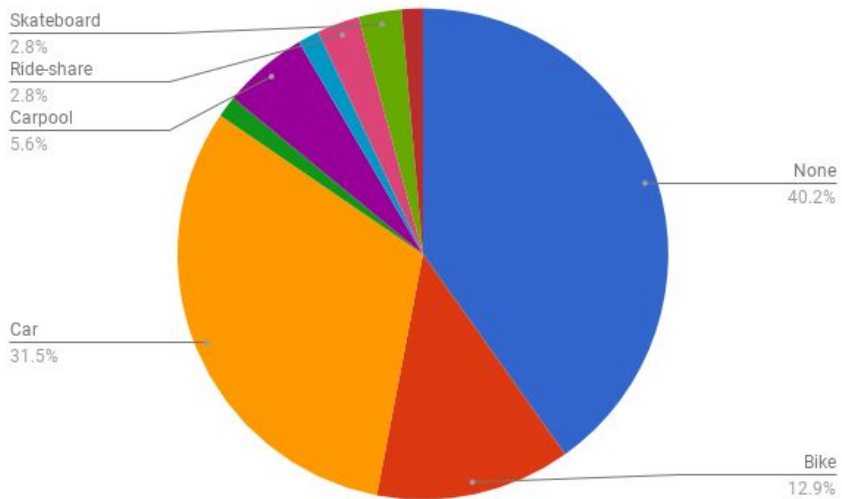
70 responses



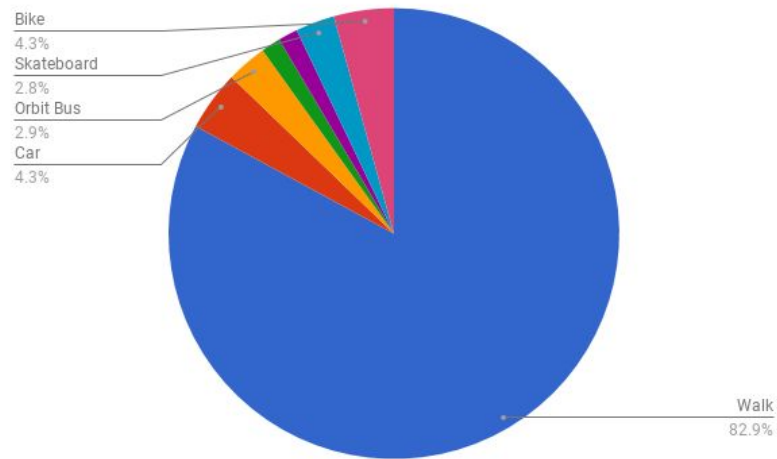


Representing the 72 - Cont'd

Do you have other forms of Transportation?



How do you get to the bus stop?



Positive Feedback

- Convenience
- Easy to use and fairly dependable
- Better than walking
- Relatively cheap
- Comfortable and clean with air conditioning
- Riders don't have to stress about driving and can use the extra time to relax





Negative Feedback

- Concerns about safety
- Frequency of buses is subpar, many riders wanted more buses
- Covered bus stops would be great for the summertime
- There needs to be a bus tracking app
- Bus drivers often will pass bus stops without stopping
- Schedules that ran earlier and later (especially on Sundays)
- More bike locks available at bus stops
- Not all buses have wheelchair ramps
- Riders wanted music on the bus

Cleveland

- Healthline was Cleveland's first Bus Rapid Transit (BRT) system, which replaced 108 bus stops with 36
- Reduced travel time from 40 minutes to 28
- Includes 21 hybrid-electric vehicles
- Each Rapid Transit Vehicle (RTV) carries nearly 20,000 riders daily
- Operates 24/7 with a rush hour frequency of every 8 minutes
- Ridership has grown more than 31% since opening
- Delivered more than \$6.3 billion in economic development since 2008
- Produced 90% fewer emissions than standard buses



Personal Recommendations from Cleveland

- 1). **Pick the right corridor.**
- 2). **Buy in by community leaders.**
- 3). BRT is flexible, but you need to **deliver an improvement.**
- 4). **Prettiness matters. Newness matters.**
- 5) **Coordination at all levels;** city, county, state, transit authority, and country.



Mexico City Metrobús

- 21.2 million people in the metropolitan area
- Home to the 2nd biggest rapid transit system in North America, which cost \$800 million
- 7 lines which run from 4:30 to midnight on weekdays and 5 to midnight on weekends
- a single fare is roughly 38 US cents
- Metrobus opened in 2006, and carries approximately 1,152,000 passengers on weekdays
- The metrobus has reduced travel times along corridor by 50%
- Metrobus has reduced approx. 36,000 tons of carbon dioxide and 9,900 tons of carbon monoxide annually
- 30% reduction in accidents. Metrobús lanes are also used by emergency vehicles
- In 2014, the Metrobus network transported a total of 254 million passengers.



Alternative Transportation Challenges & Response

- Societal discouragement of participation - Phoenix has observed a decline in bus ridership since 2013
- Light rail systems are more attractive to riders than BRT
- Lack of secondary infrastructure
- Funding
- Backlash from public when removing general traffic lanes



Transitioning

- Better representation of daily commuters on bus lines & their need for a timely and reliable mode of transportation
- A rebranding of the public transportation system for public perception
- Display of other influential cities with effective BRT systems
- Education on benefits for public transportation within Tempe
- Engagement with stakeholders
- Communication with Tempe residents for societal, economic, and environmental benefits of public transportation (billboards, public displays, advertising, surveying, commercials, etc.)





Thank you