Cycling and Public Transit: How well do these mix for older adults?



dblTilde CORE
Community Outreach, Research & Education

Cycling & Society 2025
Negotiating limits: finding, creating and renegotiating space for cycling

Carol Kachadoorian
Executive Director, dblTilde CORE, Inc

dblTilde CORE
Community Outreach, Research & Education



Work on older adult mobility and wellness
Research, Workshops, Conferences, Webinars

- 50+ Cycling Survey (5 years)
- Cycling Cessation
- How older adults experience AMI
- Older Adult Communities and AMI
- eBikes
- Use of Public Transit
- Trails and Older Cyclists

Agenda

- Foundational information on mobility and wellness for older adults
- How public transit helps cyclists
- The study responses
- Recommentations



dblTilde CORE
Community Outreach, Research & Education



How do we create mobility options so older adults can remain active, mobile, and independent as they age?

(In the United States and Canada)

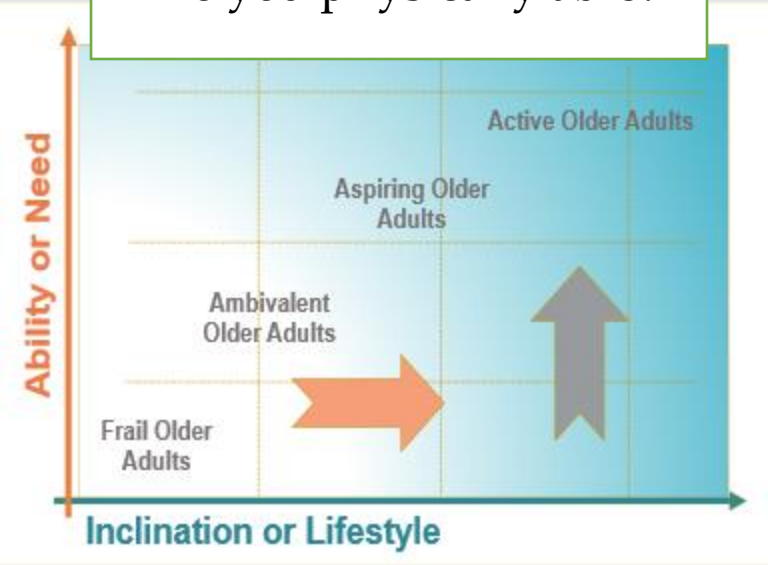
Foundational Information

dblTilde CORE
Community Outreach, Research & Education

Three interconnected frameworks

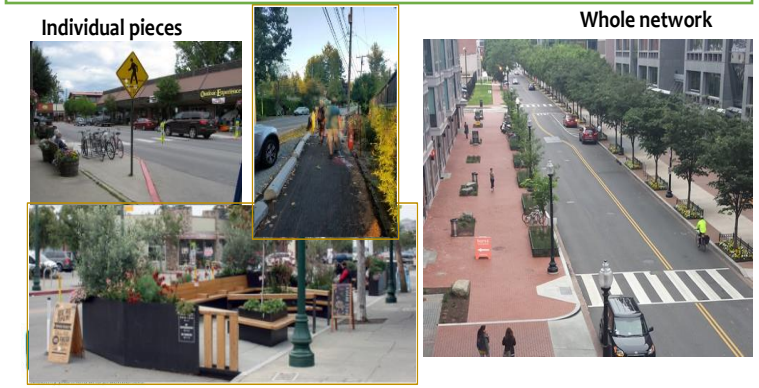
Older Adult Typology of PA

Are you physically able?



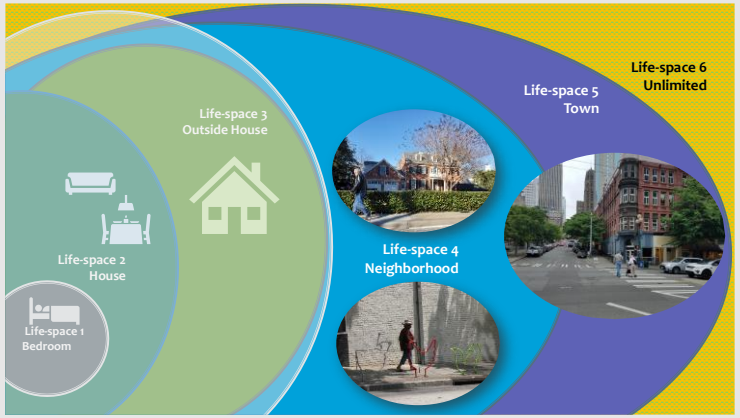
Person-Environment Fit

Does the built environment, including public transit, fit your need or intent?



Life-Space Mobility

Can you get to you destination?

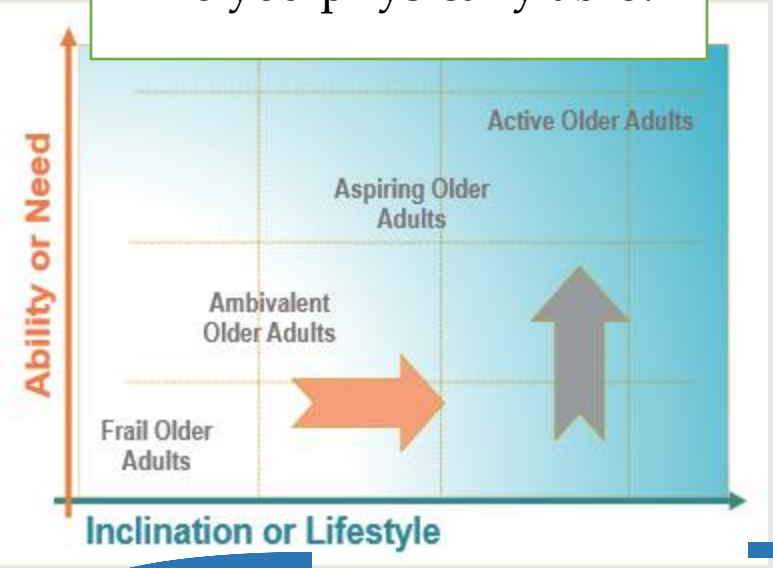


dblTilde CORE
Community Outreach, Research & Education

Three interconnected frameworks

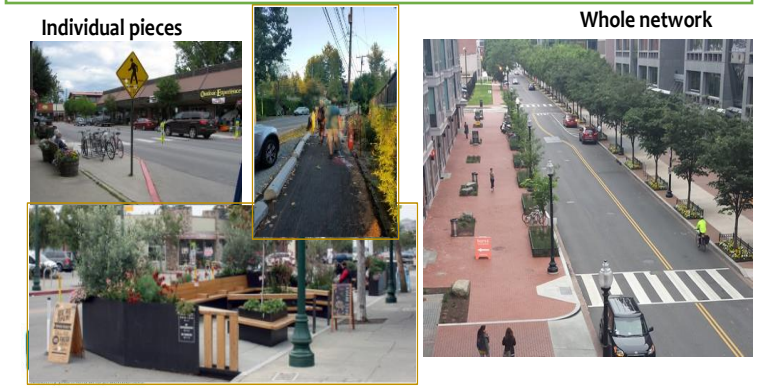
Older Adult Typology of PA

Are you physically able?



Person-Environment Fit

Does the built environment, including public transit, fit your need or intent?

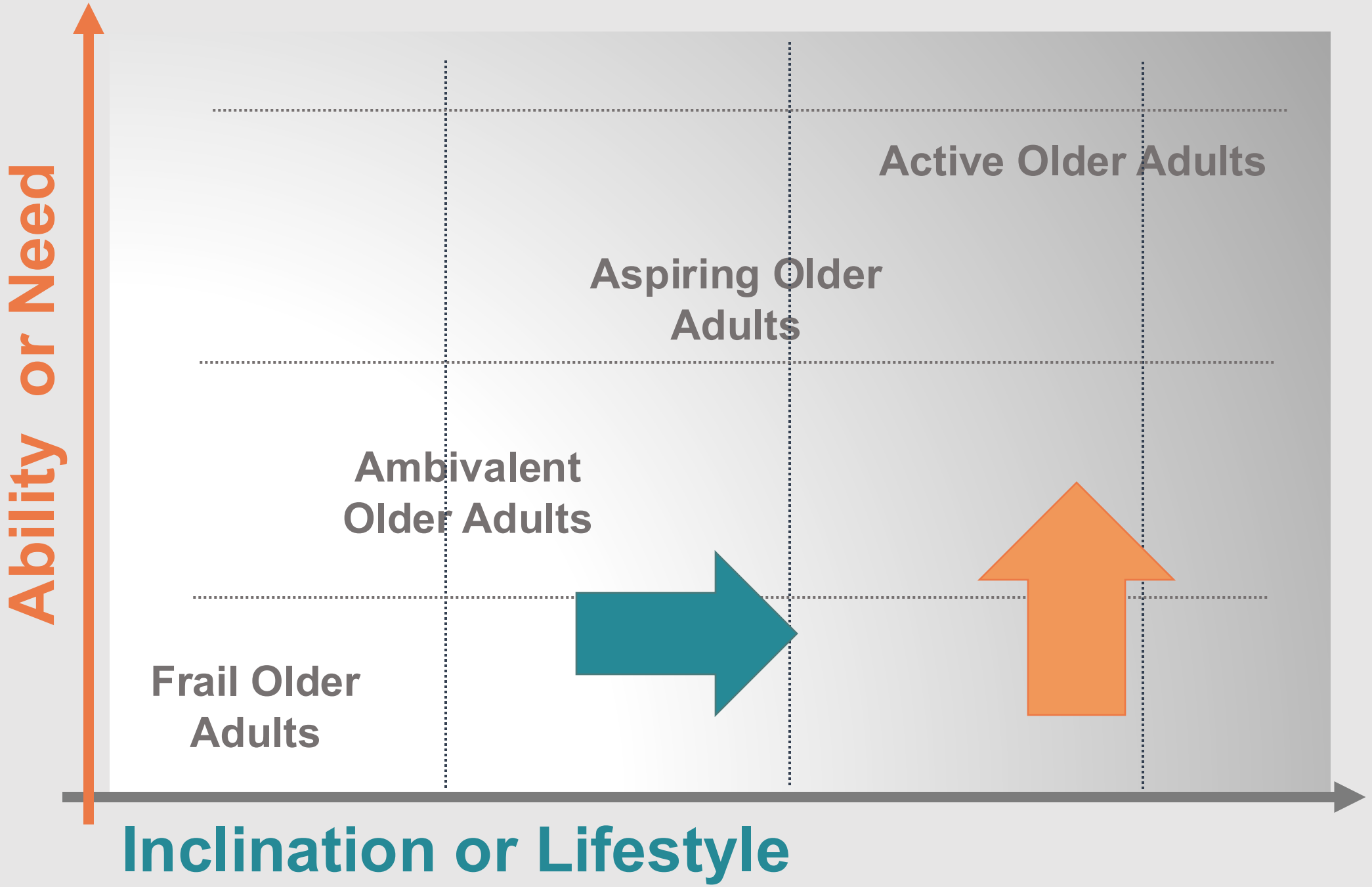


Life-Space Mobility

Can you get to you destination?



dblTilde CORE
Community Outreach, Research & Education


Ability or Need
Active Older Adults
Aspiring Older Adults
Ambivalent Older Adults
Frail Older Adults
Inclination or Lifestyle

Person-Environment Fit

- For mobility and wellness:
  - The built environment needs to ‘fit’ the person who expects to use it
  - The person adapts her or his behavior based on
    - The available built environment
    - Personal goals and preferences
- Can affect:
  - Community and social connection
  - Amount of physical activity
  - Overall quality of life

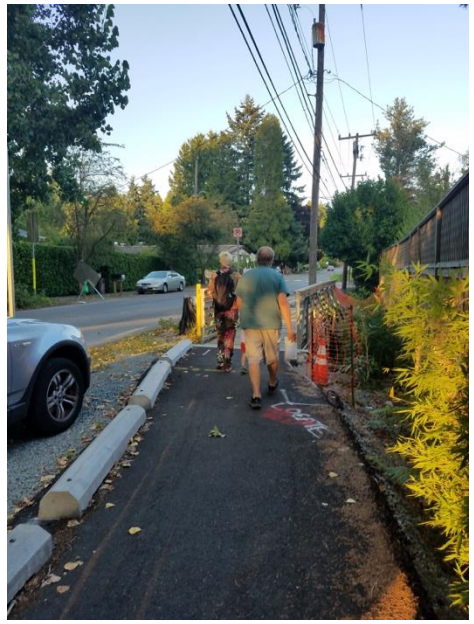


dblTilde CORE
Community Outreach, Research & Education

It's about

Individual pieces



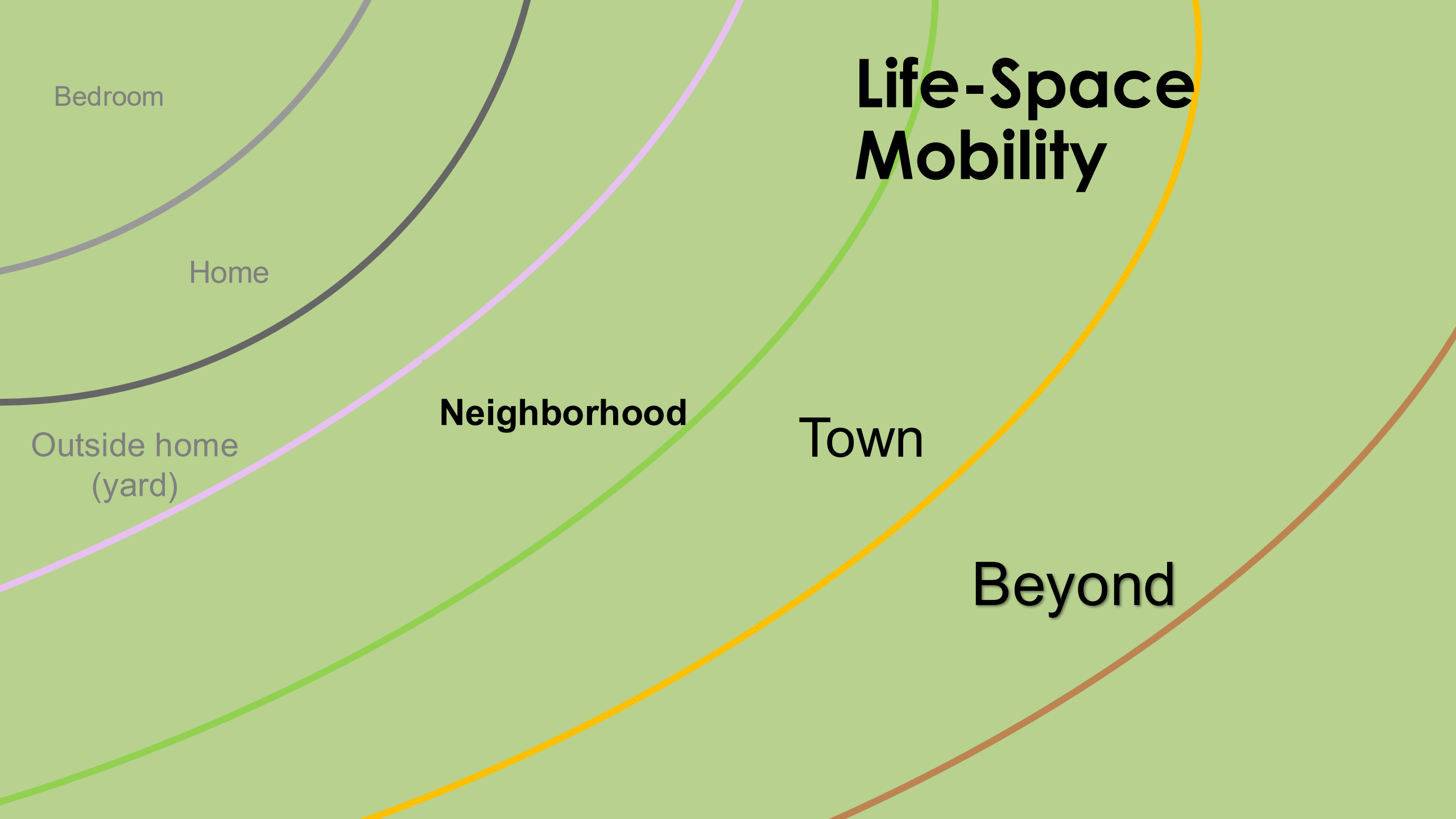




Whole network



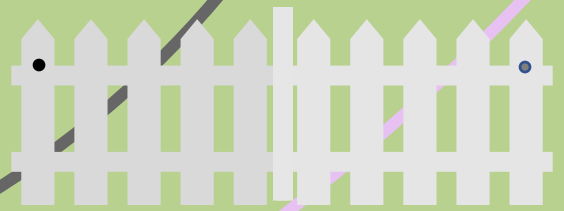
dblTild
Communi
Research & Education


Life-Space Mobility
Bedroom
Home
Outside home (yard)
Neighborhood
Town
Beyond

Life-Space Mobility

Bedroom

Home



Outside home (yard)

Neighborhood

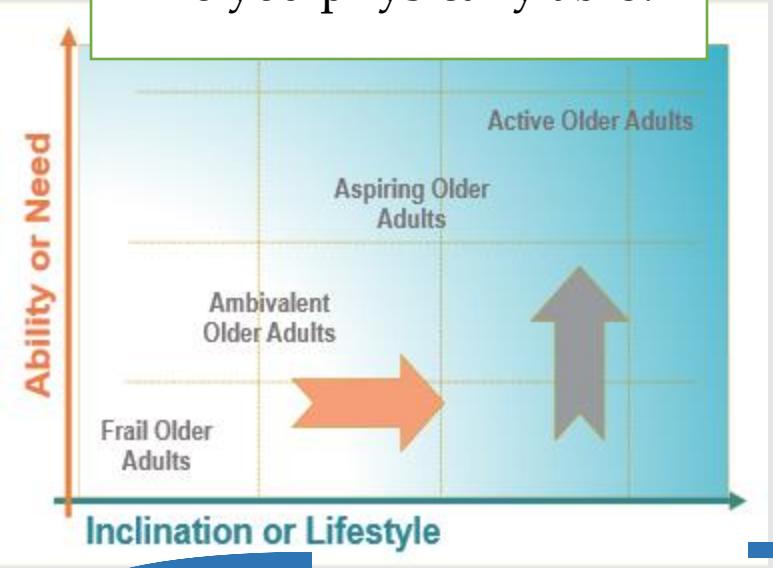
Town

Beyond

Three interconnected frameworks

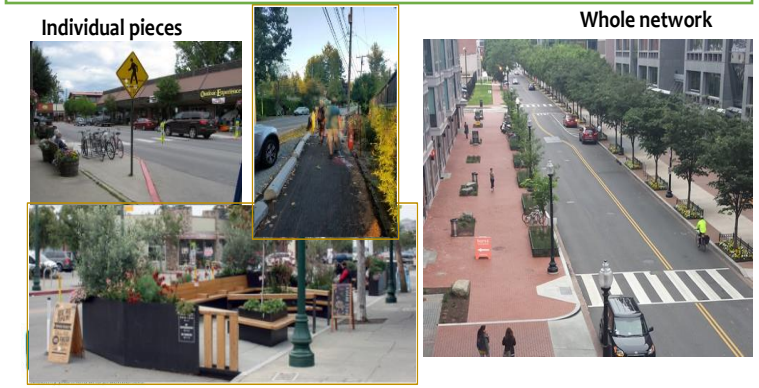
Older Adult Typology of PA

Are you physically able?



Person-Environment Fit

Does the built environment, including public transit fit your need or intent?



Life-Space Mobility

Can you get to you destination?



dblTilde CORE
Community Outreach, Research & Education

What do we know about older adults who cycle?

dblTilde CORE
Community Outreach, Research & Education

From the 50+ Cycling Survey







- Will cycle as long as they can as they age
- Prefer separation from motor vehicles
- Adjust length and type of cycling due to abilities and circumstances
- Get a different bike to keep cycling
- *Where friendship and exercise move together*

dblTilde CORE
Community Outreach, Research & Education

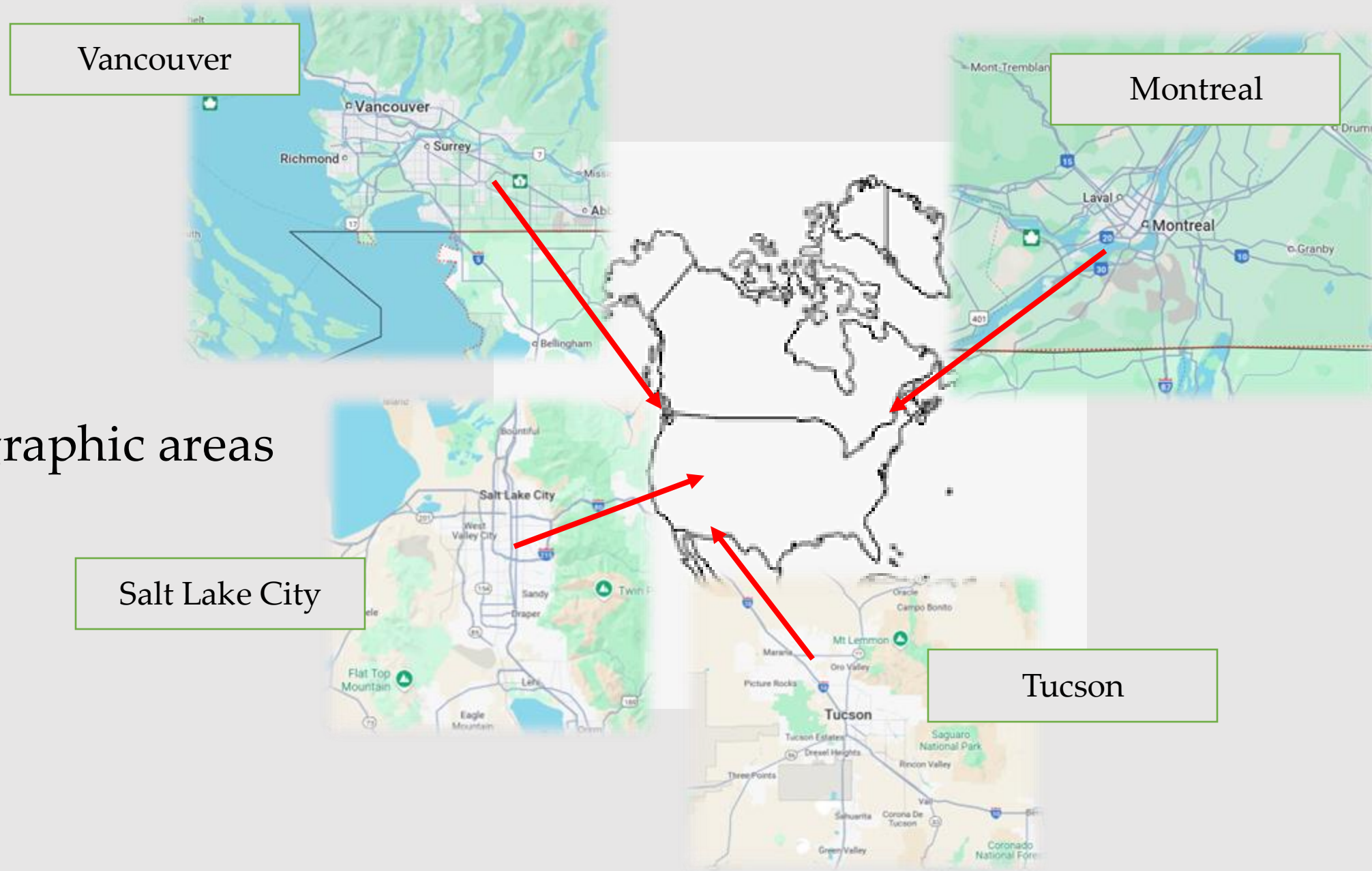


How do we design cycling-with-transit so that older people can continue to cycle?

The Study

dblTilde CORE
Community Outreach, Research & Education

Limited geographic areas



dblTilde CORE
Community Outreach, Research & Education

Focus groups

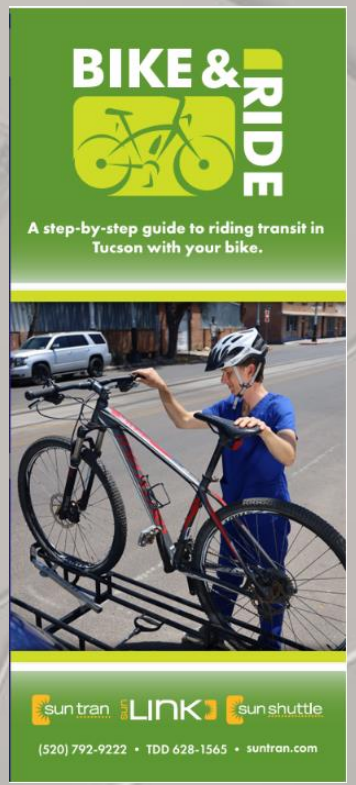


Short survey



Transit agency information





dblTilde CORE
Community Outreach, Research & Education


I feel that transit systems are increasingly important as we age, but less and less friendly because our needs are changing. This is true also of the bike network if it is not well-constructed and robust.

How do transit system support cycling-transit trips?

- Extends the distance people who cycle can go
- Allows travel through non-bike-friendly areas
- Provides relief from fatigue, weather, or time-constraints

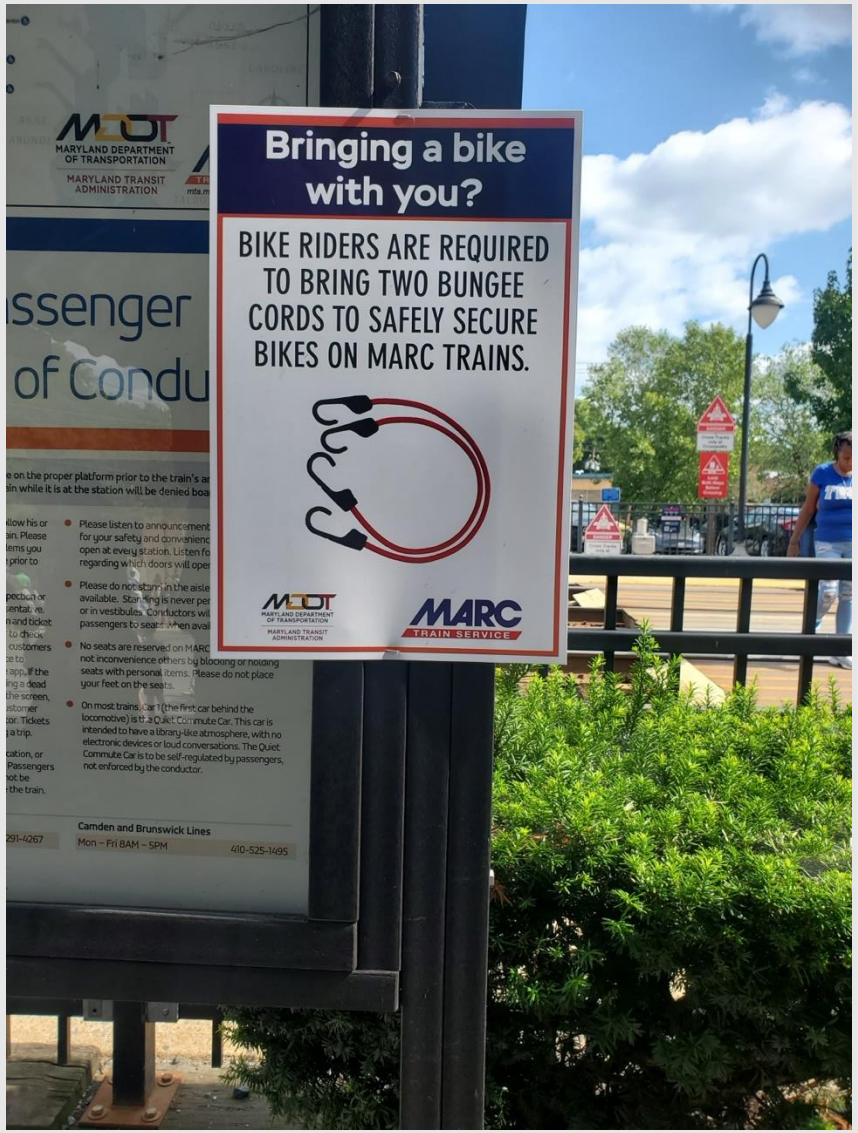




dblTilde CORE
Community Outreach, Research & Education

How does transit service and facilities do this?

- Service profile
  - Locations served
  - Service hours, days of week
  - Frequency of service
- Station access, parking
- Bike-on-transit policies
- Bicycle holding devices

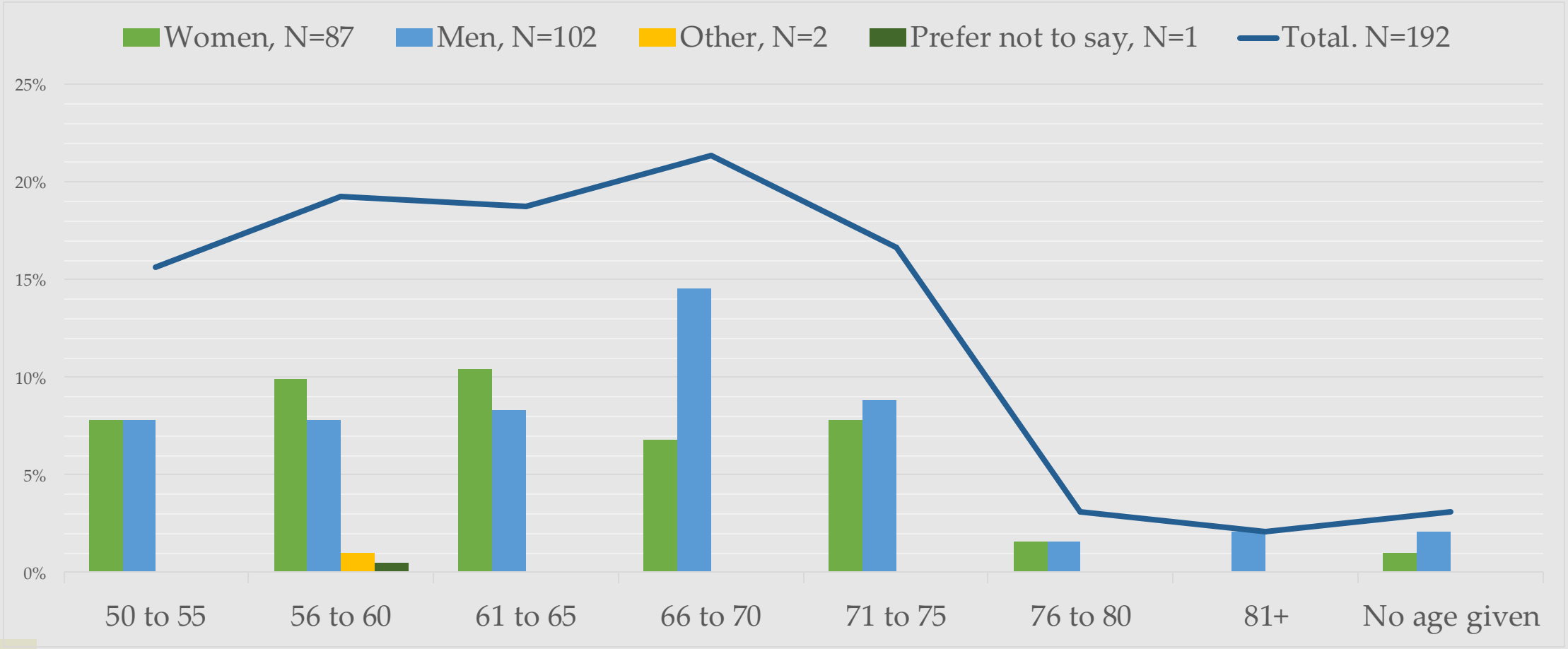


dblTilde CORE
Community Outreach, Research & Education

What we learned

dblTilde CORE
Community Outreach, Research & Education

Survey responses by age group and gender

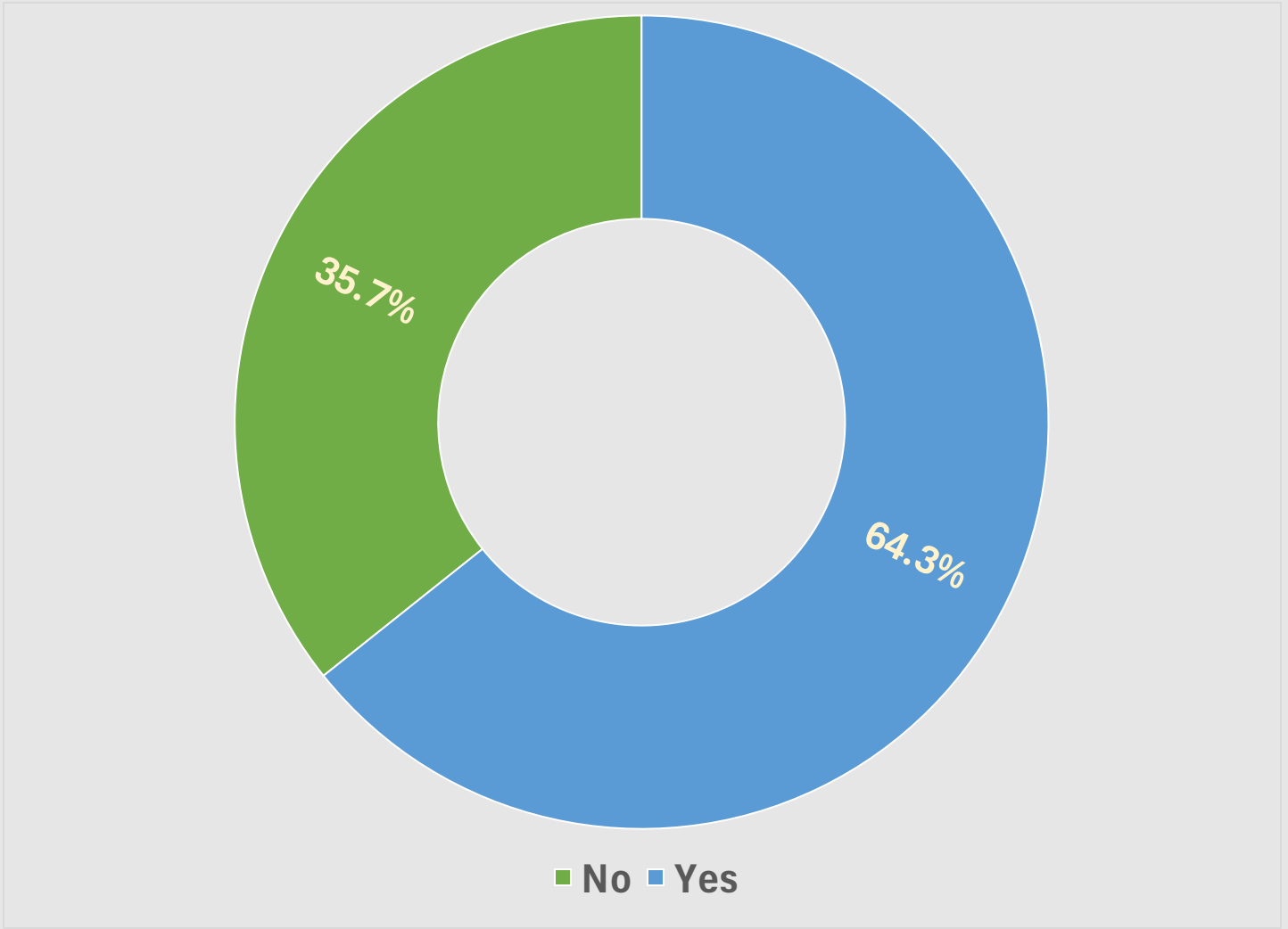


dblTilde CORE
Community Outreach, Research & Education

Do you use public transit as part of a cycling trip?

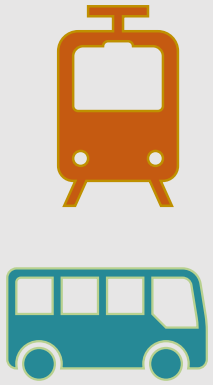


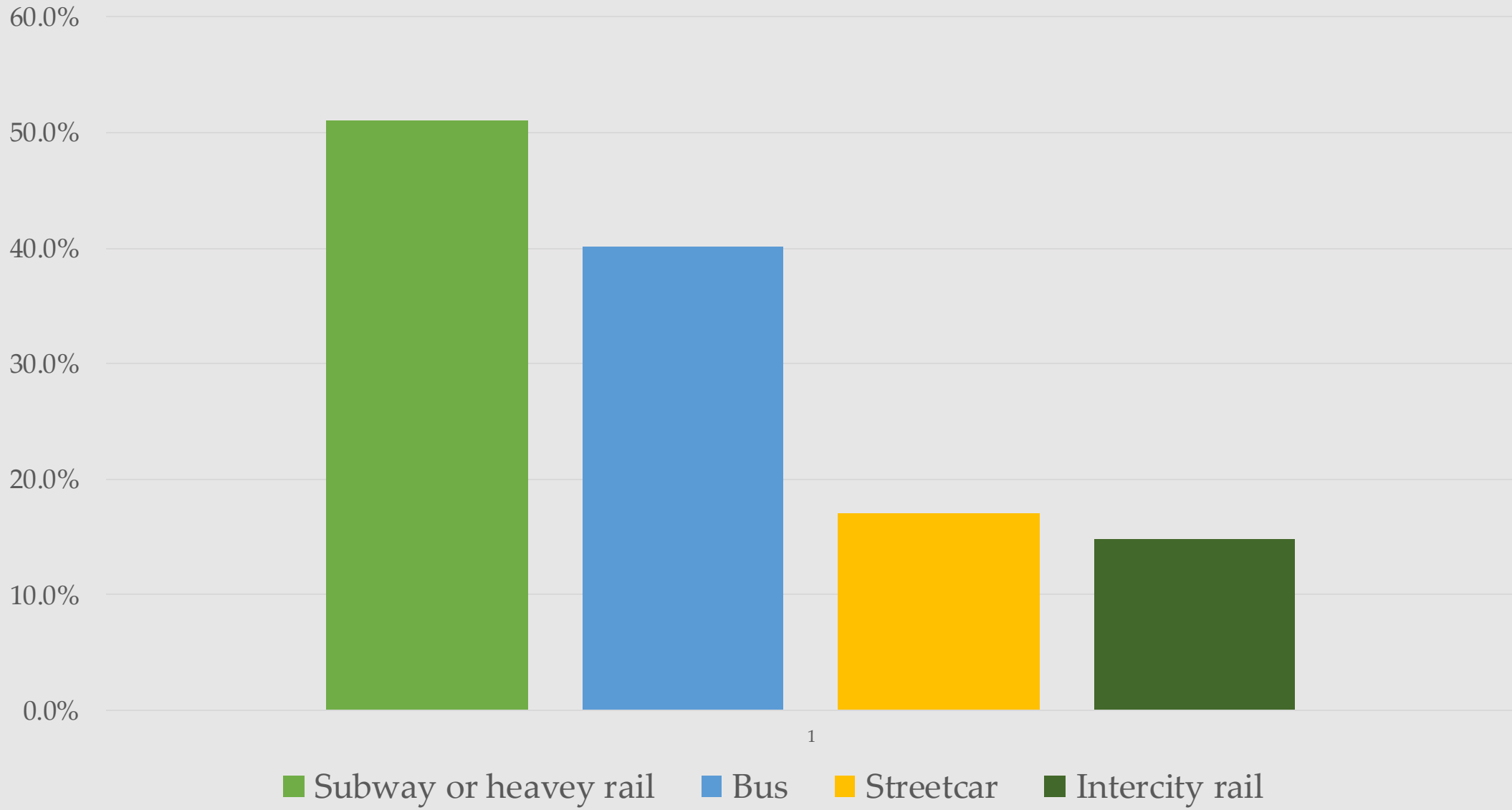




dblTilde CORE
Community Outreach, Research & Education

Which do you use?



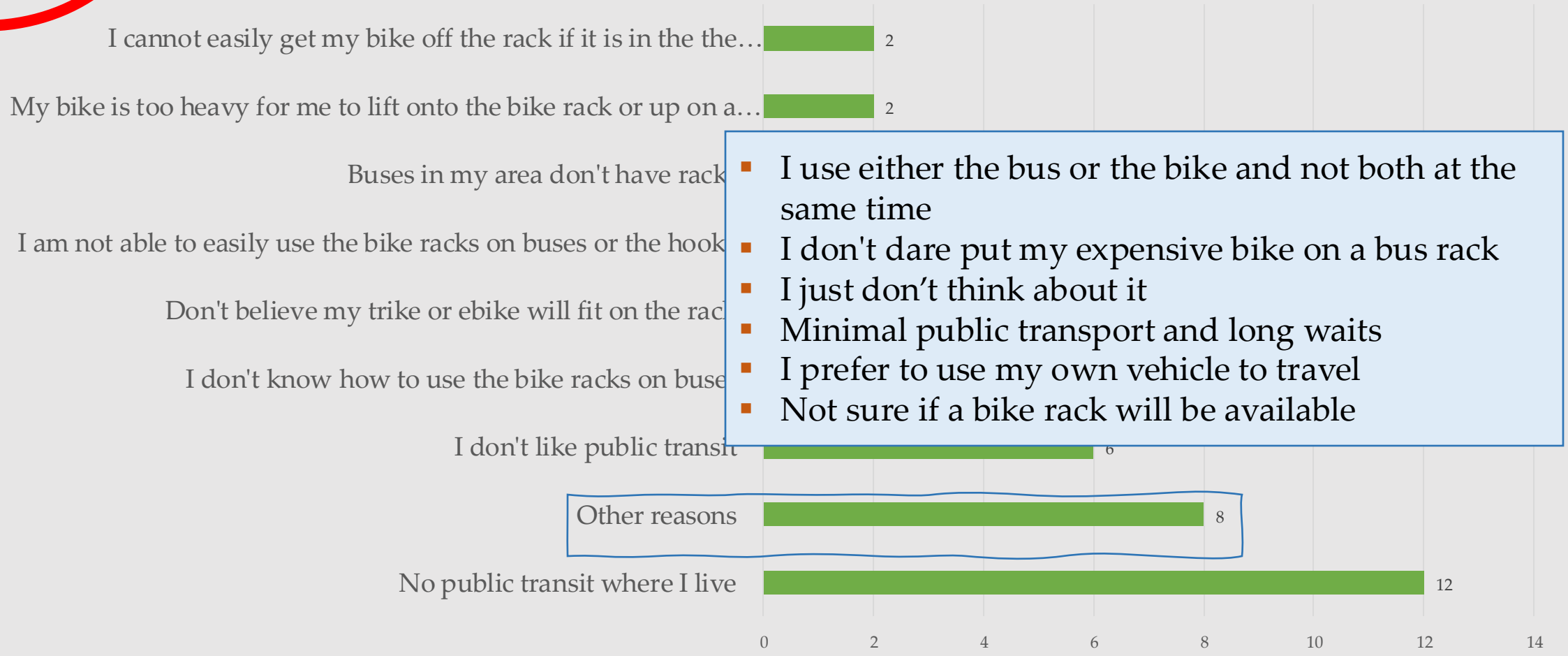


dblTilde CORE
Community Outreach, Research & Education



Why don’t you use public transit?

N= 81

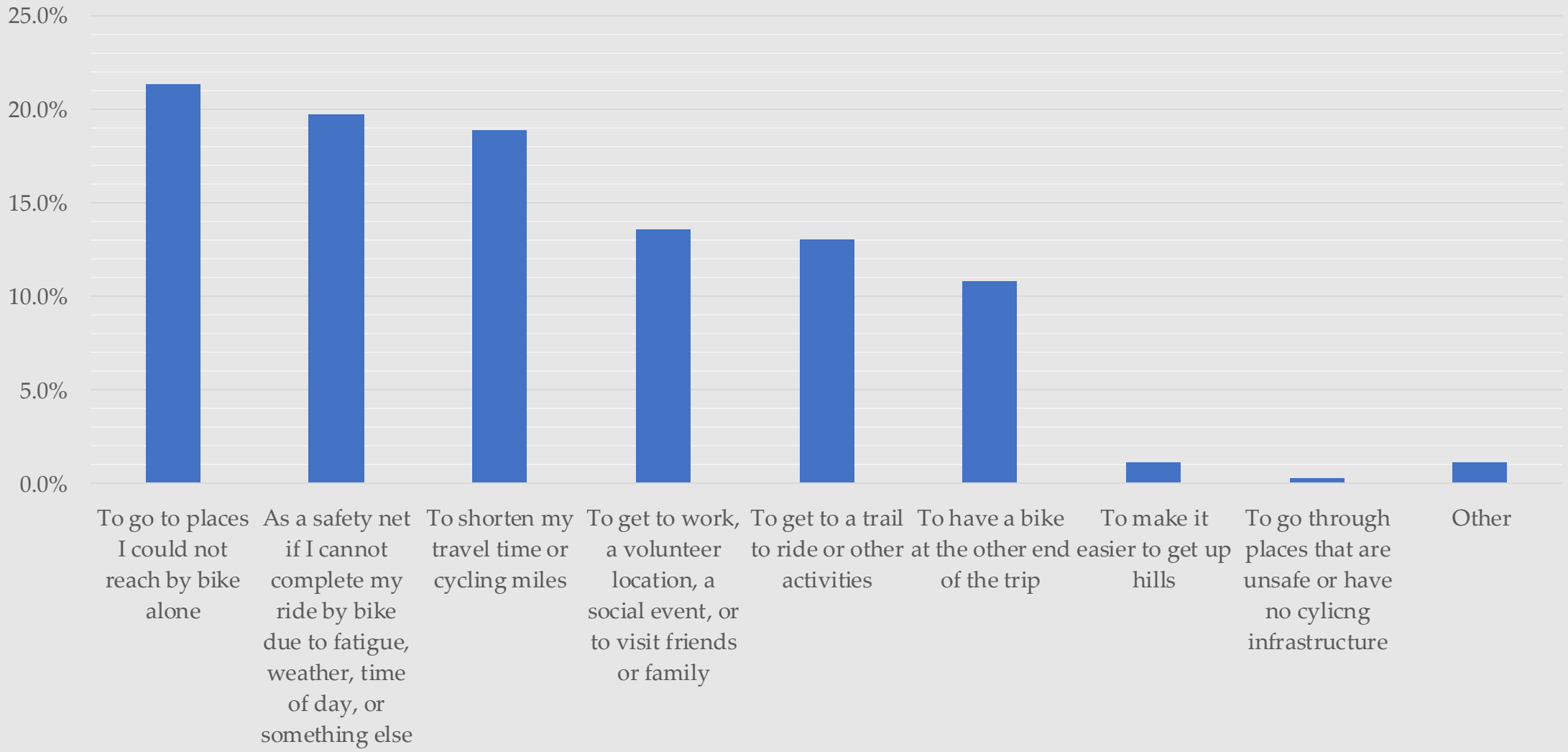


- I use either the bus or the bike and not both at the same time
- I don't dare put my expensive bike on a bus rack
- I just don’t think about it
- Minimal public transport and long waits
- I prefer to use my own vehicle to travel
- Not sure if a bike rack will be available

dblTilde CORE
Community Outreach, Research & Education

How do you use public transit?

N=360



dblTilde CORE
Community Outreach, Research & Education

How do you use public transit?

I live in a mountainous terrain, so I use the bus or train to get up the mountains. This extends the distances I can ride. The transit service between Ogden and Provo is good.

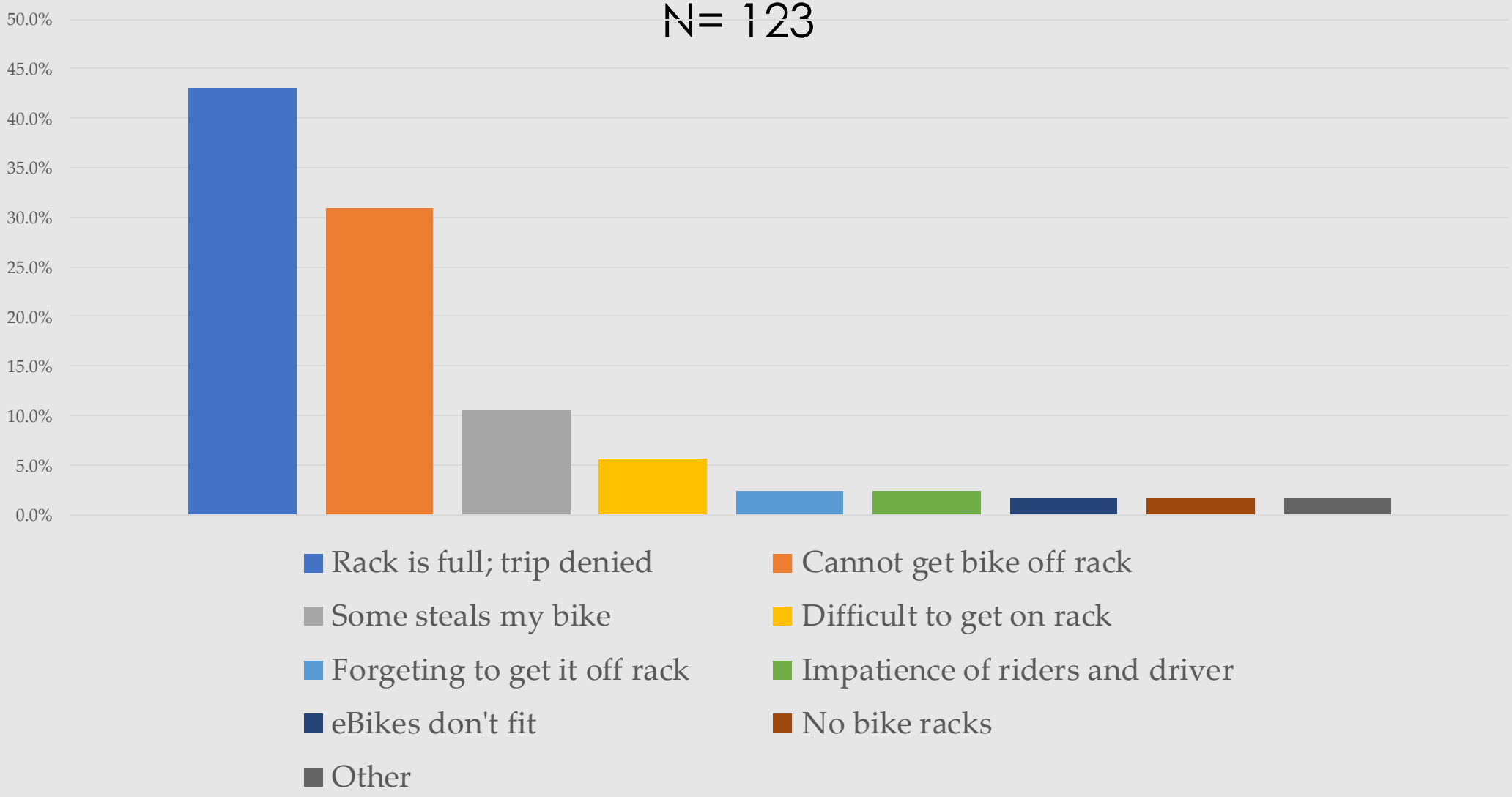




dblTilde CORE
Community Outreach, Research & Education

What concerns to do you have with using racks on buses?

N= 123



dblTilde CORE
Community Outreach, Research & Education

What to do if a bus trip is denied?

N=73





dblTilde CORE
Community Outreach, Research & Education

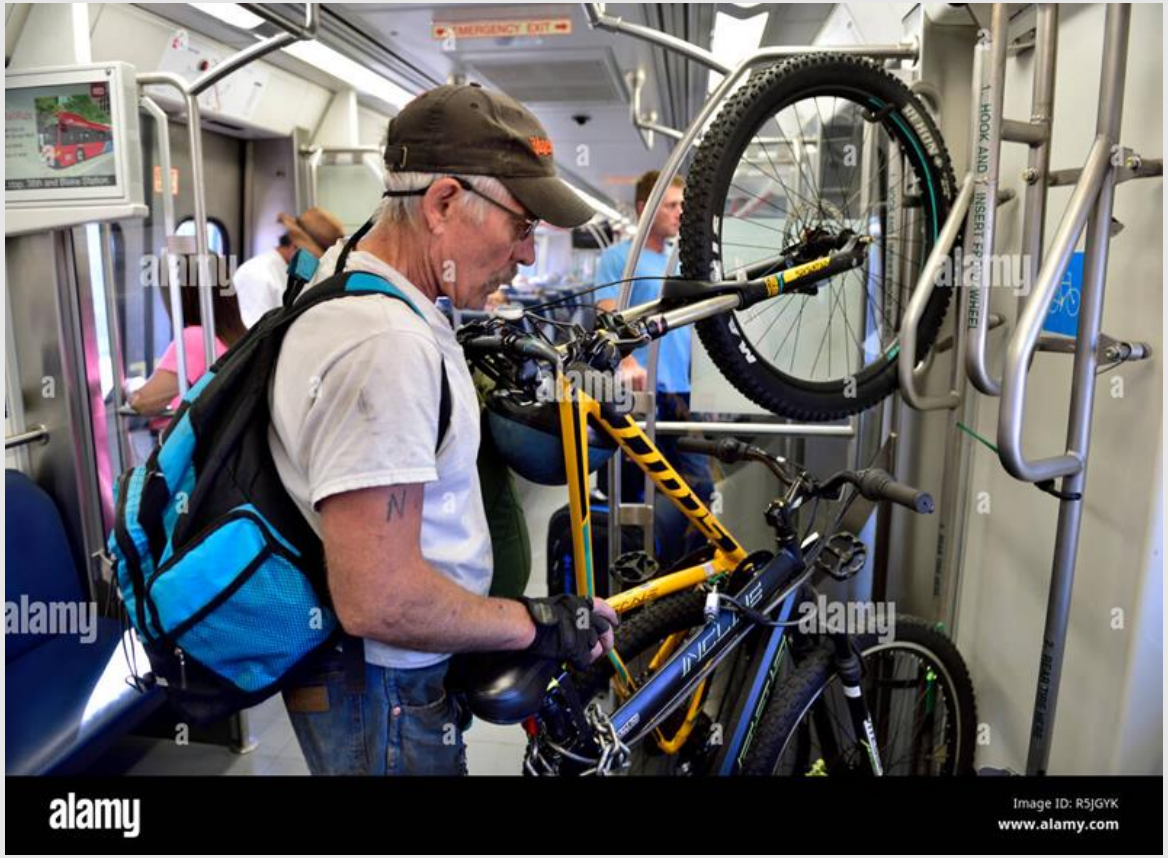
What concerns to do you have with using holding devices on trains?

N=118



dblTilde CORE
Community Outreach, Research & Education

What concerns to do you have with using holding devices on trains?



All the trains have hooks in the articulated joint and the area needs to be clear of people to use it. It's tricky to maneuver the bike.

Baggage getting heaped on top

Allowing non-bikes to take over racks and seats

dblTilde CORE
Community Outreach, Research & Education

Focus Groups

dblTilde CORE
Community Outreach, Research & Education

Deeper dive questions in focus groups



- 10 focus groups with 23 people
- Additional questions and discussion

Can you see a time when using public transit as part of a cycling trip won't make sense?

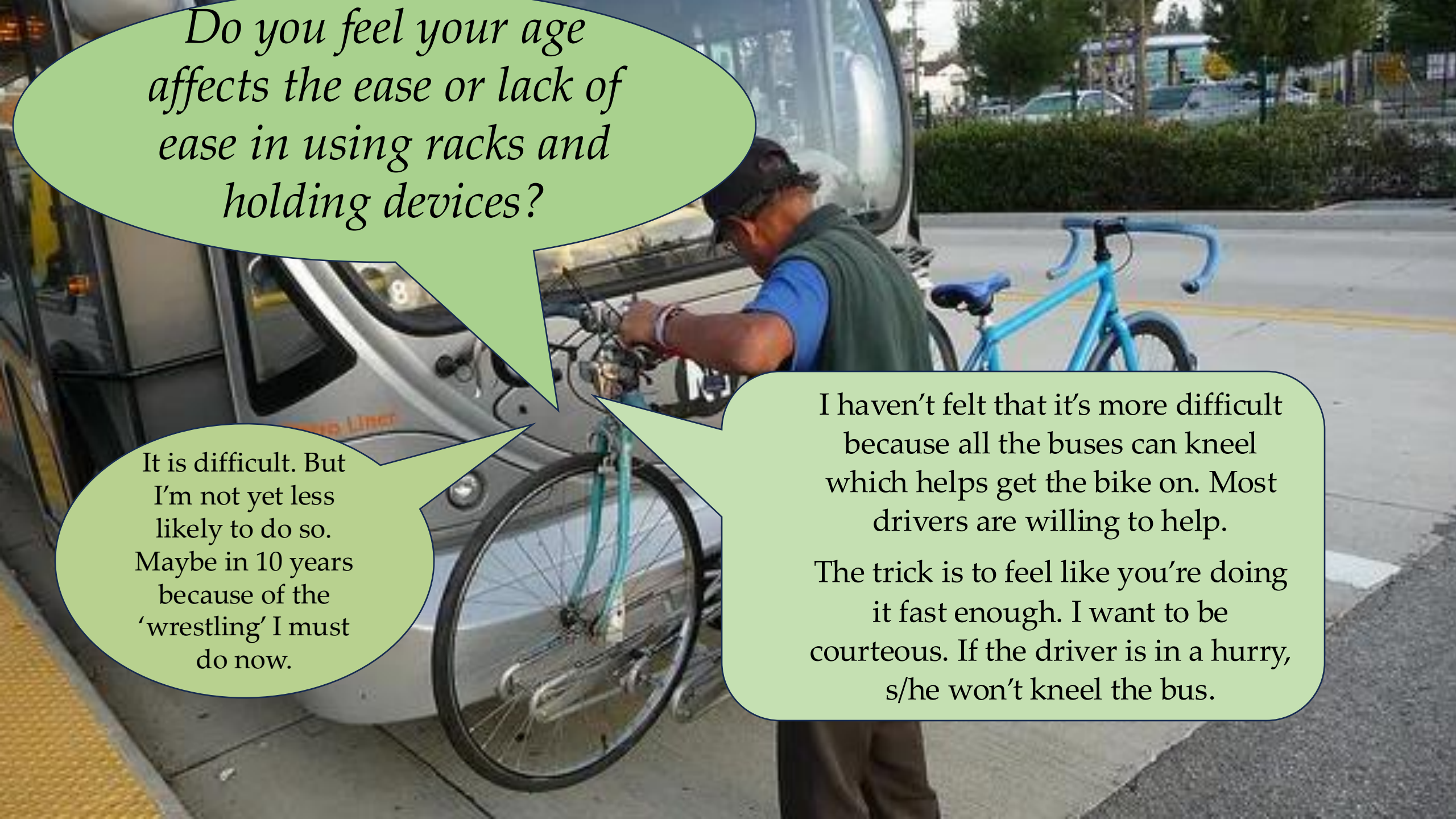


Yes, because my ebike replaces the bus.

No, I will as long as I can lift my bike onto the rack.

No, because will continue to ride normal pedal bike and want to travel farther. within the city.

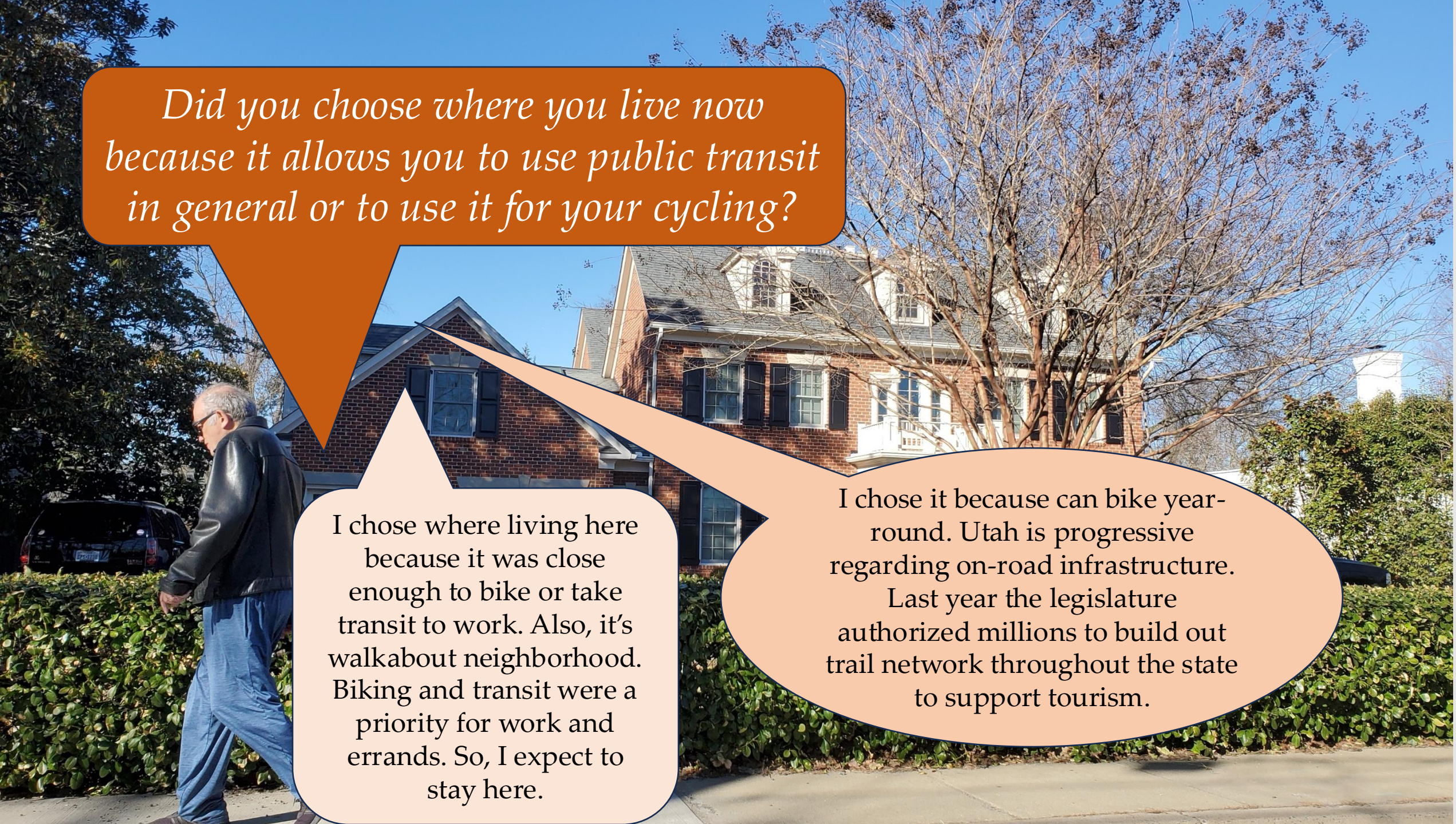
dblTilde CORE
Community Outreach, Research & Education


Do you feel your age affects the ease or lack of ease in using racks and holding devices?
It is difficult. But I'm not yet less likely to do so. Maybe in 10 years because of the 'wrestling' I must do now.
I haven't felt that it's more difficult because all the buses can kneel which helps get the bike on. Most drivers are willing to help.
The trick is to feel like you're doing it fast enough. I want to be courteous. If the driver is in a hurry, s/he won't kneel the bus.

If the train doesn't have holding devices, is it difficult to take your bike or are you less likely to do so?



dblTilde CORE
Community Outreach, Research & Education


Did you choose where you live now because it allows you to use public transit in general or to use it for your cycling?
I chose where living here because it was close enough to bike or take transit to work. Also, it's walkabout neighborhood. Biking and transit were a priority for work and errands. So, I expect to stay here.
I chose it because can bike year-round. Utah is progressive regarding on-road infrastructure. Last year the legislature authorized millions to build out trail network throughout the state to support tourism.

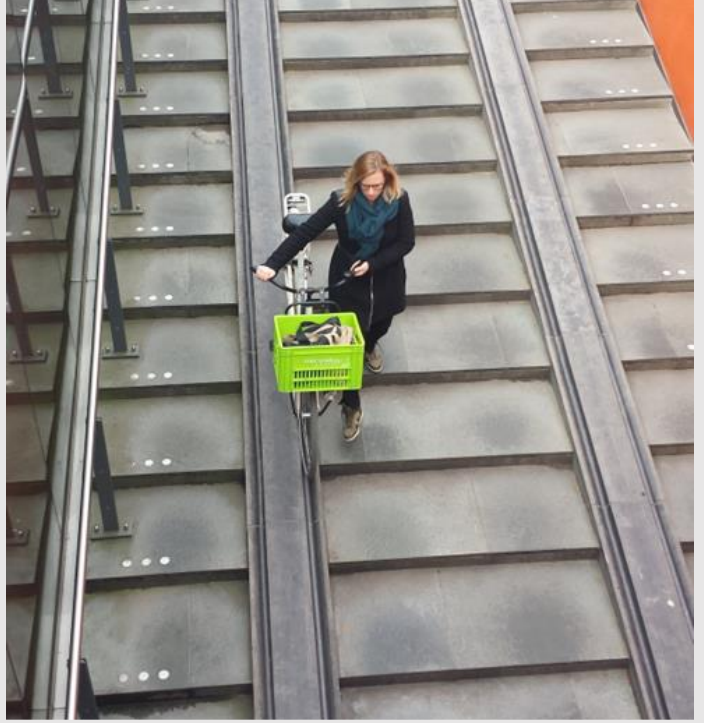
Recommendations

- Make it the norm to kneel the bus – not the exception
- Complete regular maintenance on bike racks so they are easier to use
- Increase the weight limit of bike racks so they can hold an ebike
- Work with holding device manufacturers for older cyclist-friendly devices
- Support transit service expansions for routes and service frequency

dblTilde CORE
Community Outreach, Research & Education

Recommendations

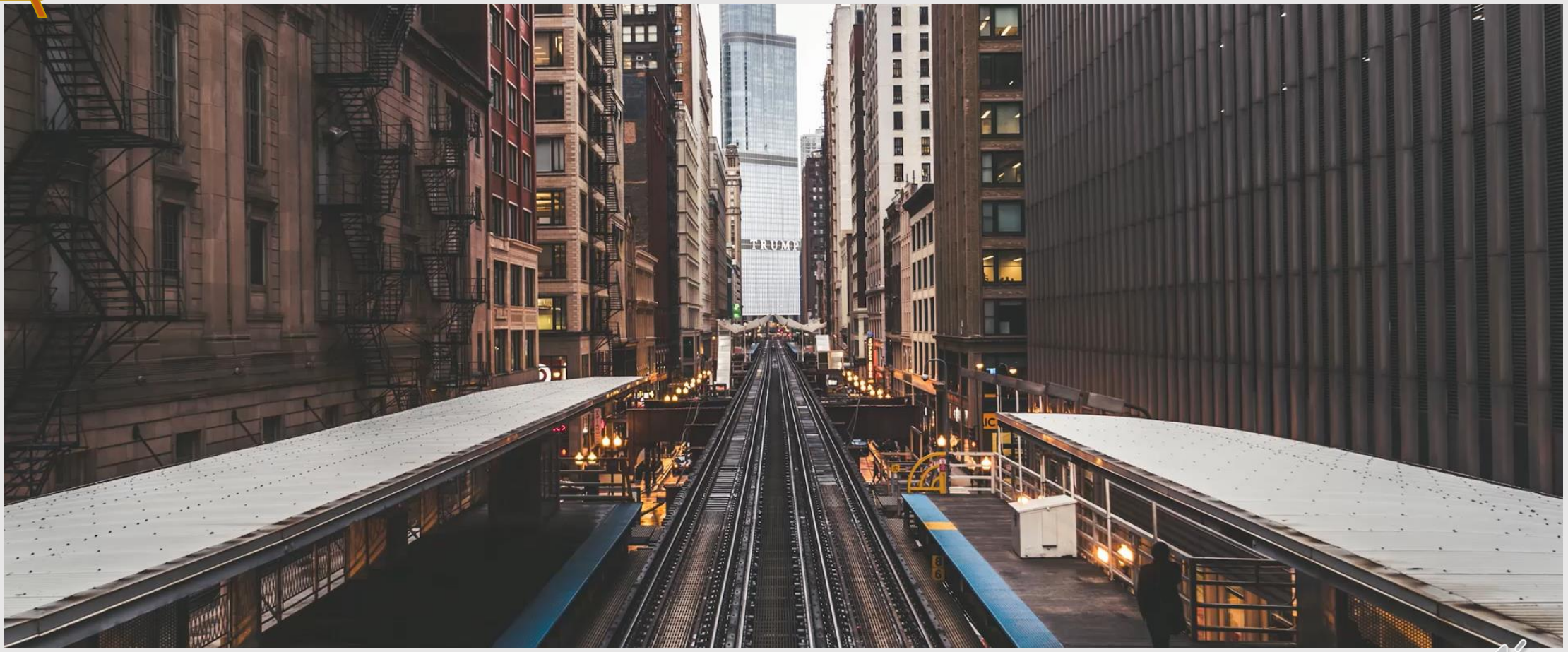
- Larger elevators
- More space on trains
- Bike trays and shallow steps
- Fewer restrictions on specific trains, times of day, or days of week





dblTilde CORE
Community Outreach, Research & Education

Recommendations for Trains



dblTilde CORE
Community Outreach, Research & Education

Recommendations

Bike Network, Infrastructure

- Denser network; better network including low stress roadway crossings and access to transit stations and stops
- Direct connections to stops and stations
- Bike network in areas with more older adults living or where they are active, including senior centers, senior living communities

Bike Network, Programs

- Bike share
- Bike-on-transit education programs



dblTilde CORE
Community Outreach, Research & Education

Thank you

carol@dblTildeCORE.org
www.dbltildeCORE.org

dblTilde CORE
Community Outreach, Research & Education



dblTilde CORE
Community Outreach, Research & Education