

 MORNING CONSULT®



IBM SUSTAINABLE MOBILITY CONSUMER STUDY

AUGUST 19 – SEPTEMBER 3, 2021

KEY FINDINGS

1. Across major metro areas, the majority of residents believe their individual carbon footprint is important. However, only about half consider sustainability when making local commute or transit choices. Instead, most consumers – and especially Americans – opt for convenience and speed.
2. However, most adults in European and U.S. cities view public transit as more environmentally friendly than personal vehicles.
3. Globally, only around one-third of respondents said rising gas prices influence their transit decision.
4. Survey respondents from Rome, San Francisco and Chicago were more inclined to opt for a personal vehicle over public transit during the pandemic to reduce the spread of COVID-19.
5. Europeans overall are slightly more inclined than American to use mobile apps when planning transit. Young Europeans (18-34) are twice as likely to use mobile apps for public transit. However, Americans are more than twice as likely to use mobile apps for ridesharing.
6. More than half (57%) of respondents currently own/lease an EV or plan to within the next few years. In general, the majority (71%) agree that EVs are a sustainable mode of transit.
7. Across U.S. and European cities, cost is the leading barrier to EV ownership. However, Munich residents were more likely to cite skepticism over sustainability claims and ethics of supply chain compared to other cities. The second most common barrier for other cities was limited charging stations.

Methodology: This study was conducted by Morning Consult on behalf of IBM from August 19-September 3, 2021. The study was conducted among 1000 adults in each city (Munich, Rome, London, San Francisco, and Chicago). The study was conducted online and the data were stratified to match a target sample of adults in each city on age and gender, then weighted based on age, gender, race, and education level. Results from each city have a margin of error of plus or minus 3 percentage points.

AGENDA

SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

ELECTRIC VEHICLE ATTITUDES

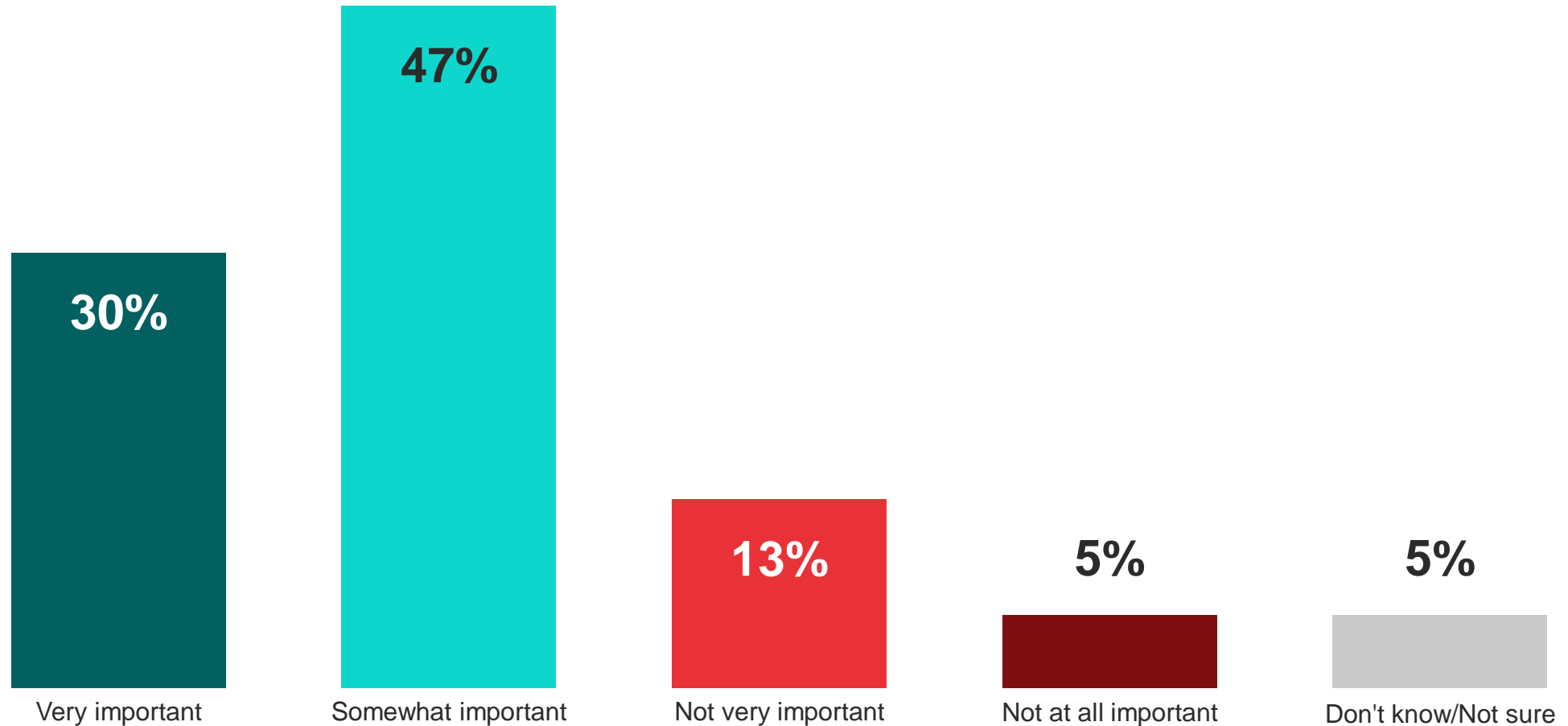
CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

A vast majority of Europeans and Americans (77%) say their individual carbon footprint is important to them.

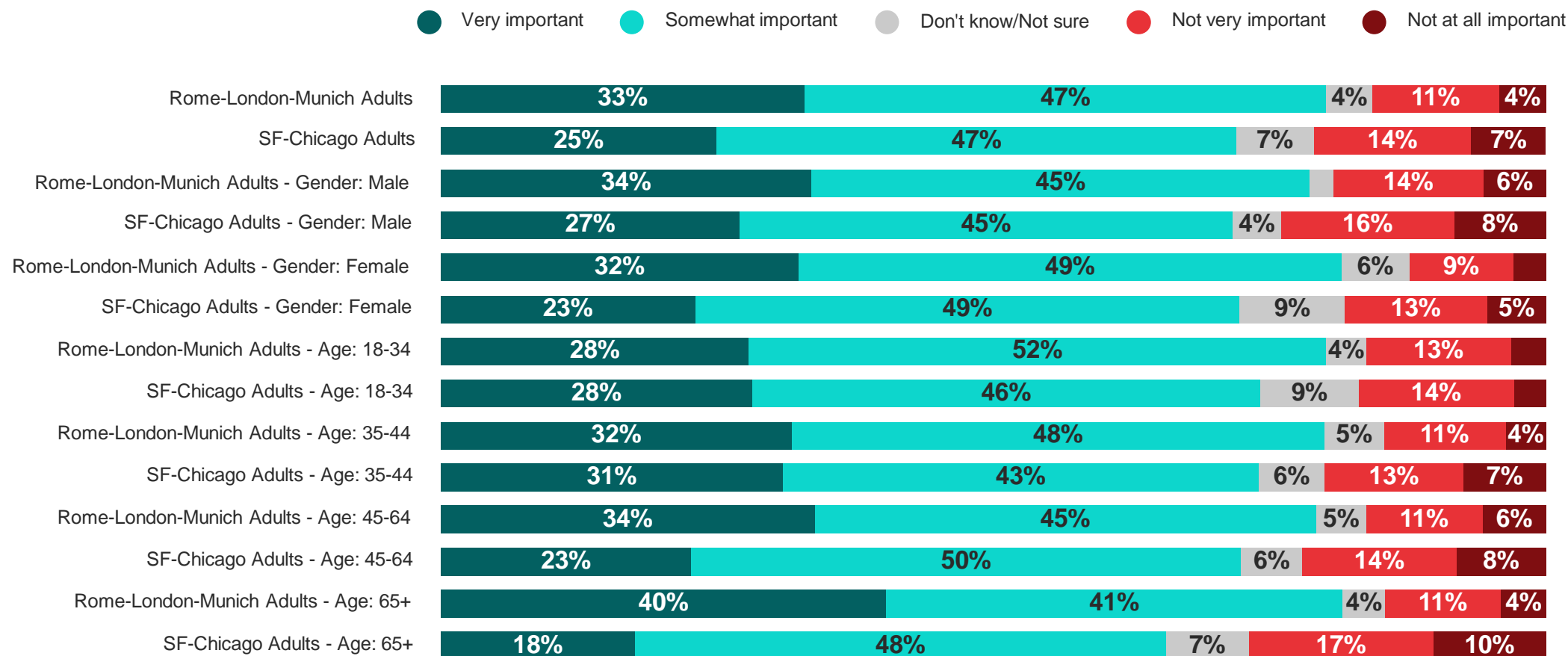
How important is your carbon footprint (your personal impact on the environment measured by the amount of resources e.g. land required to sustain the use of nature's natural resources) to you?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Generally, men tend to care a little more about their carbon footprint than women. In addition, respondents in Rome 65+ lead the way in finding their carbon footprint “very important” at 40%.

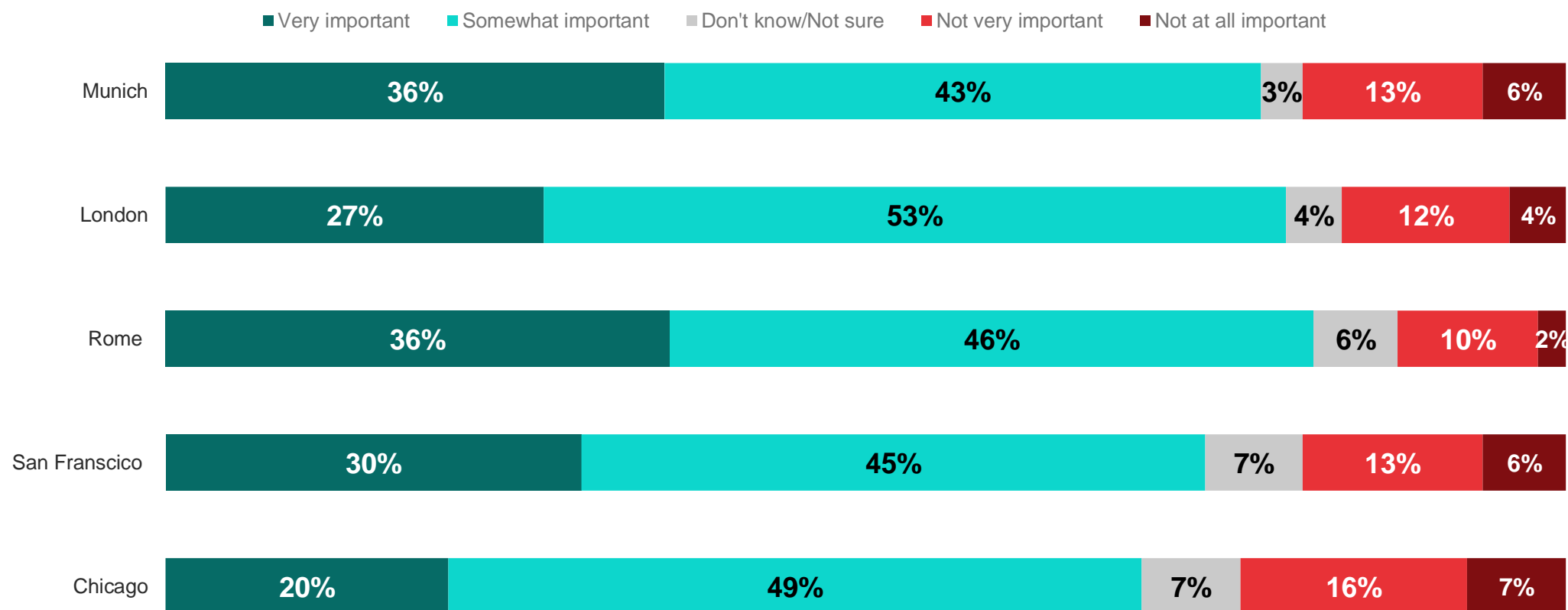
How important is your carbon footprint (your personal impact on the environment measured by the amount of resources e.g. land required to sustain the use of nature's natural resources) to you?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Europeans from Munich, London, and Rome value their individual carbon footprint more than Americans from San Francisco and Chicago.

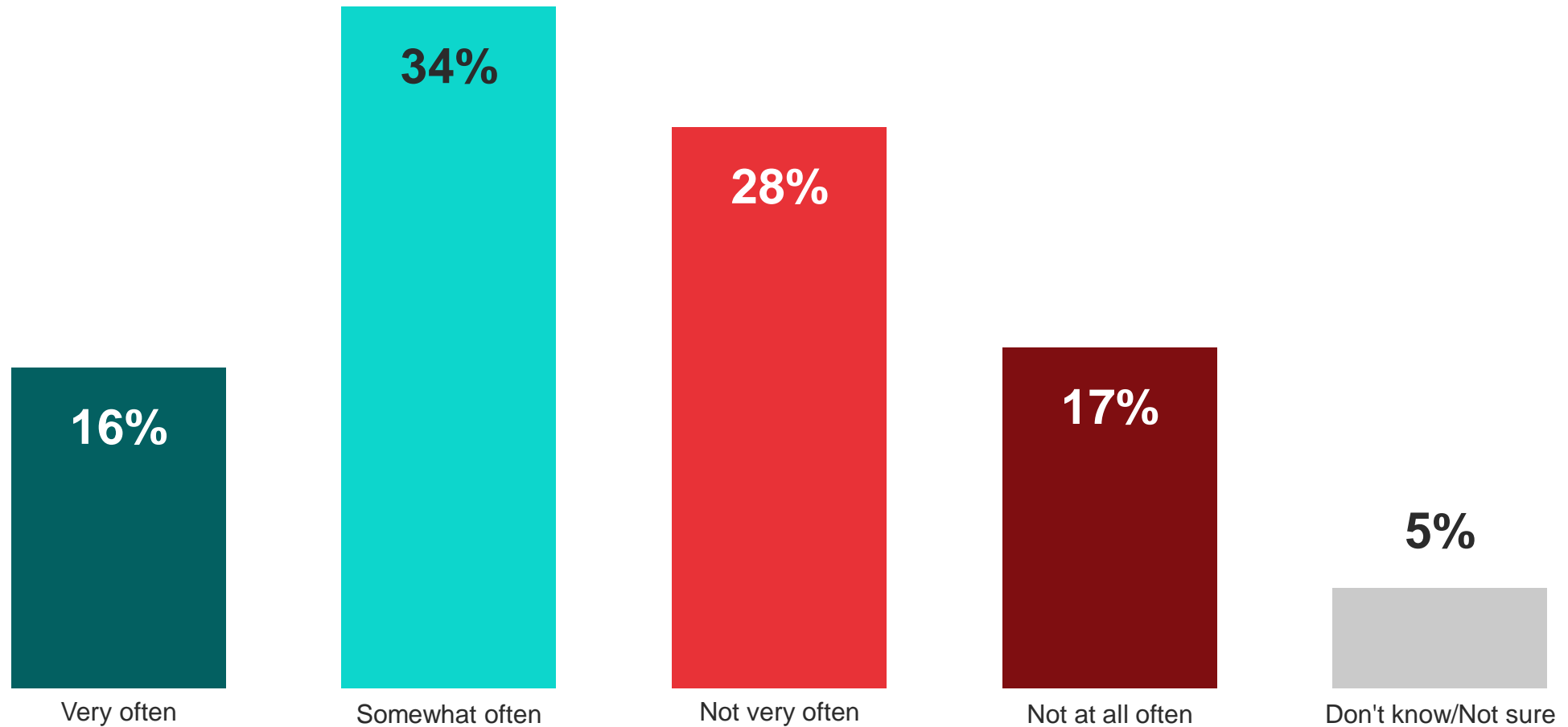
How important is your carbon footprint (your personal impact on the environment measured by the amount of resources e.g. land required to sustain the use of nature's natural resources) to you?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Half of respondents said they "often" consider their carbon footprint when selecting daily modes of transportation.

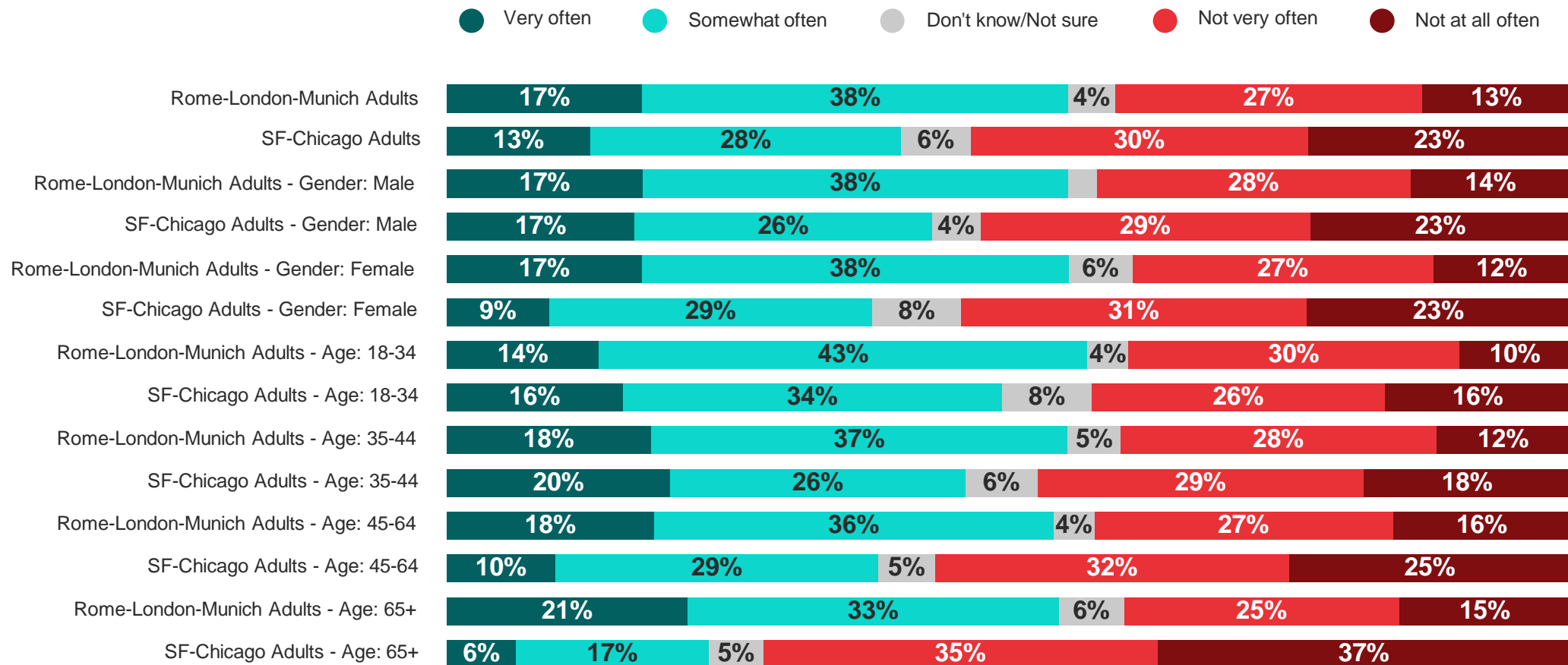
How often do you consider your carbon footprint when selecting daily transportation (your personal impact on the environment measured by the amount of resources e.g. land required to sustain the use of nature's natural resources)?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

While European men and women evenly often consider their carbon footprint when selecting daily transportation, American men often consider it a little more (5% more) than American women.

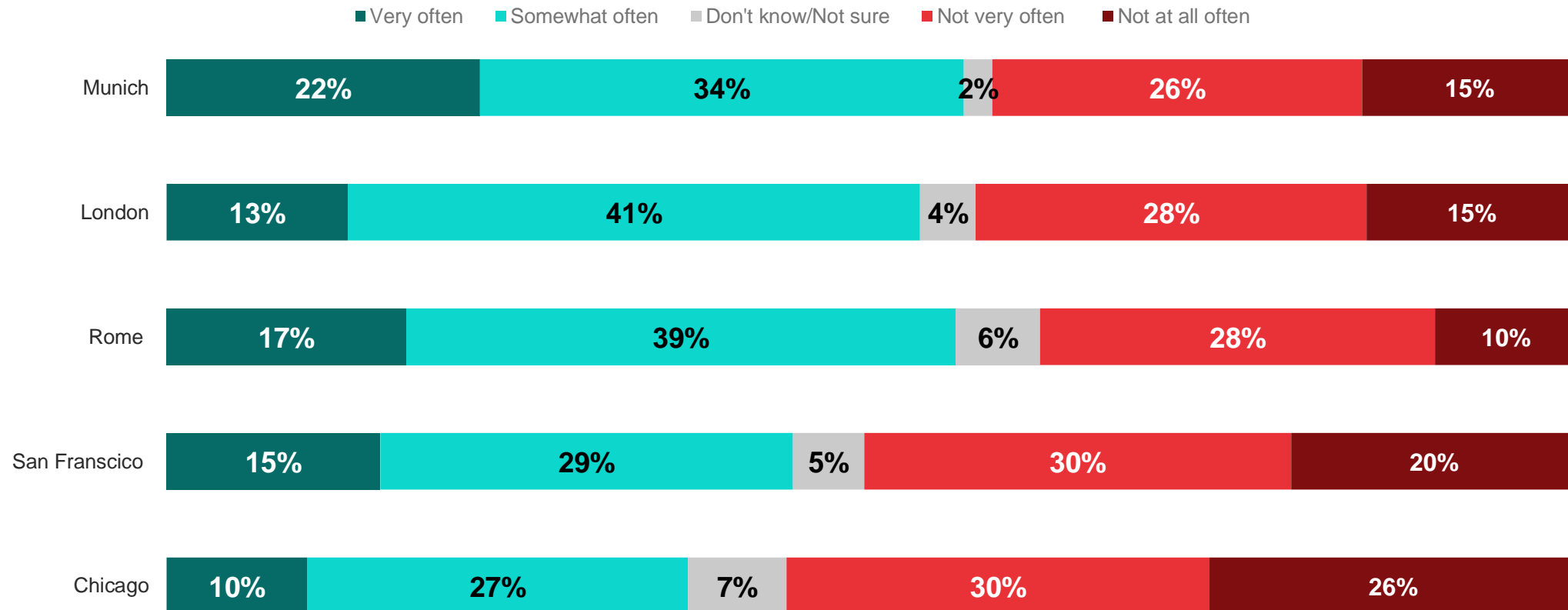
How often do you consider your carbon footprint when selecting daily transportation (your personal impact on the environment measured by the amount of resources e.g. land required to sustain the use of nature's natural resources)?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Generally, Europeans often consider their carbon footprint when selecting daily transportation more than Americans.

How often do you consider your carbon footprint when selecting daily transportation (your personal impact on the environment measured by the amount of resources e.g. land required to sustain the use of nature's natural resources)?

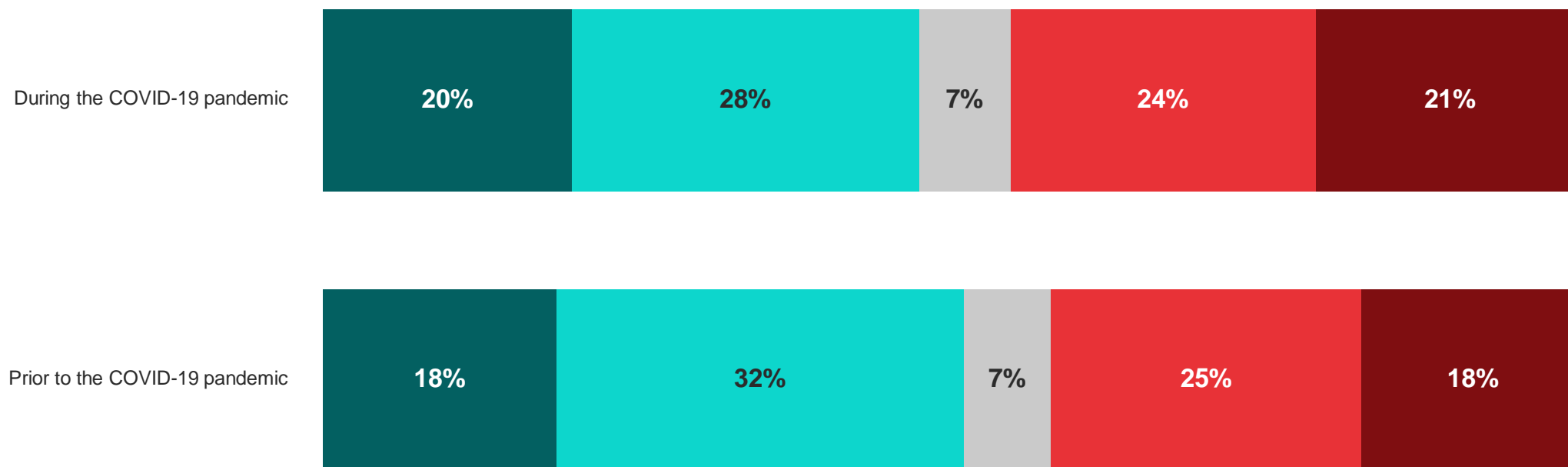


SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Europeans and Americans think about the sustainability of their modes of transportation slightly less often now than they did prior to the pandemic.

How often did you consider sustainability when choosing modes of transportation during the following time periods?

● Very often
 ● Somewhat often
 ● Don't know/Not sure
 ● Not very often
 ● Not often at all



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Those in Chicago, Munich, and particularly San Francisco considered sustainability less often during the pandemic when choosing transportation, while those in London and Rome were slightly more likely to consider sustainability during COVID-19.

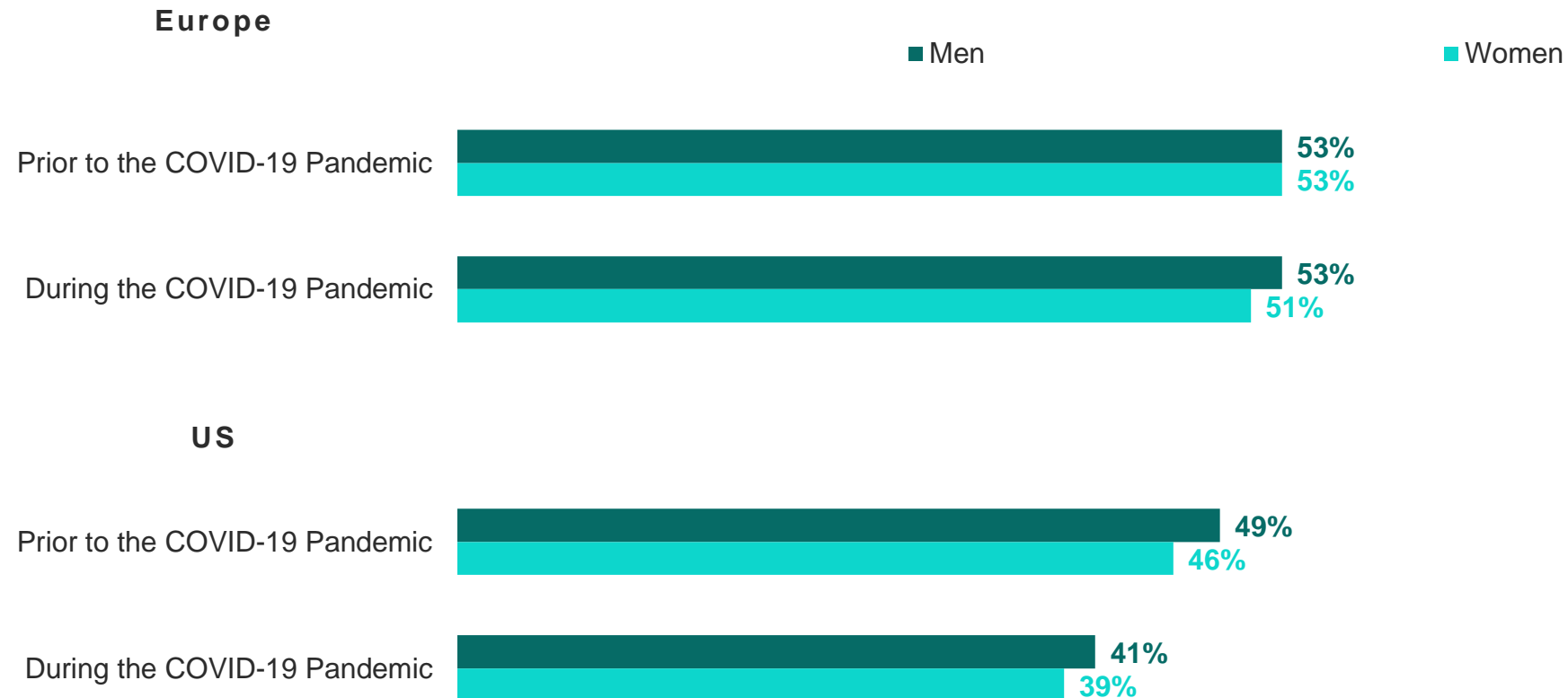
How often did you consider sustainability when choosing modes of transportation during the following time periods?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

There weren't significant differences in how men and women viewed sustainability in their transportation decisions before and after the COVID-19 pandemic.

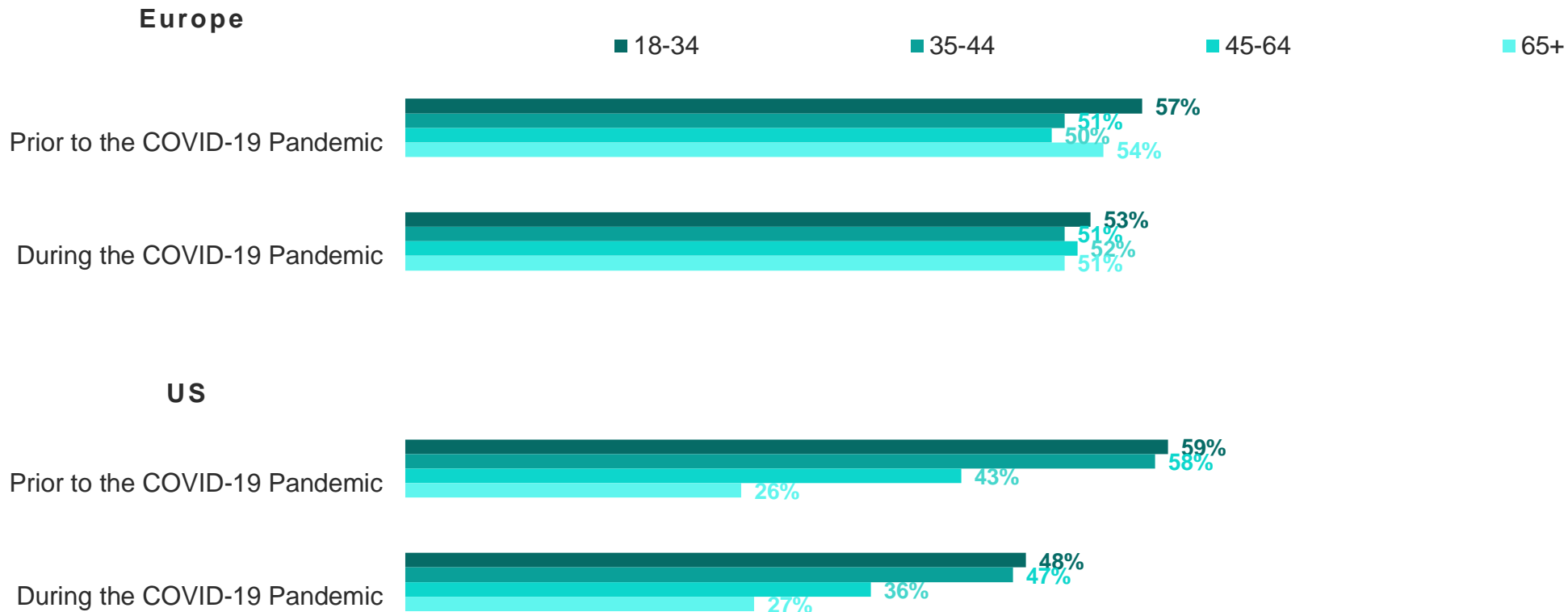
How often did you consider sustainability when choosing modes of transportation during the following time periods? [Showing % Very often + Somewhat often]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

While all ages in Europe considered sustainability in their transportation decisions before and after the pandemic, in the U.S., younger people were more likely than older Americans to care about sustainability, though those under 65 saw declines across the board after the pandemic.

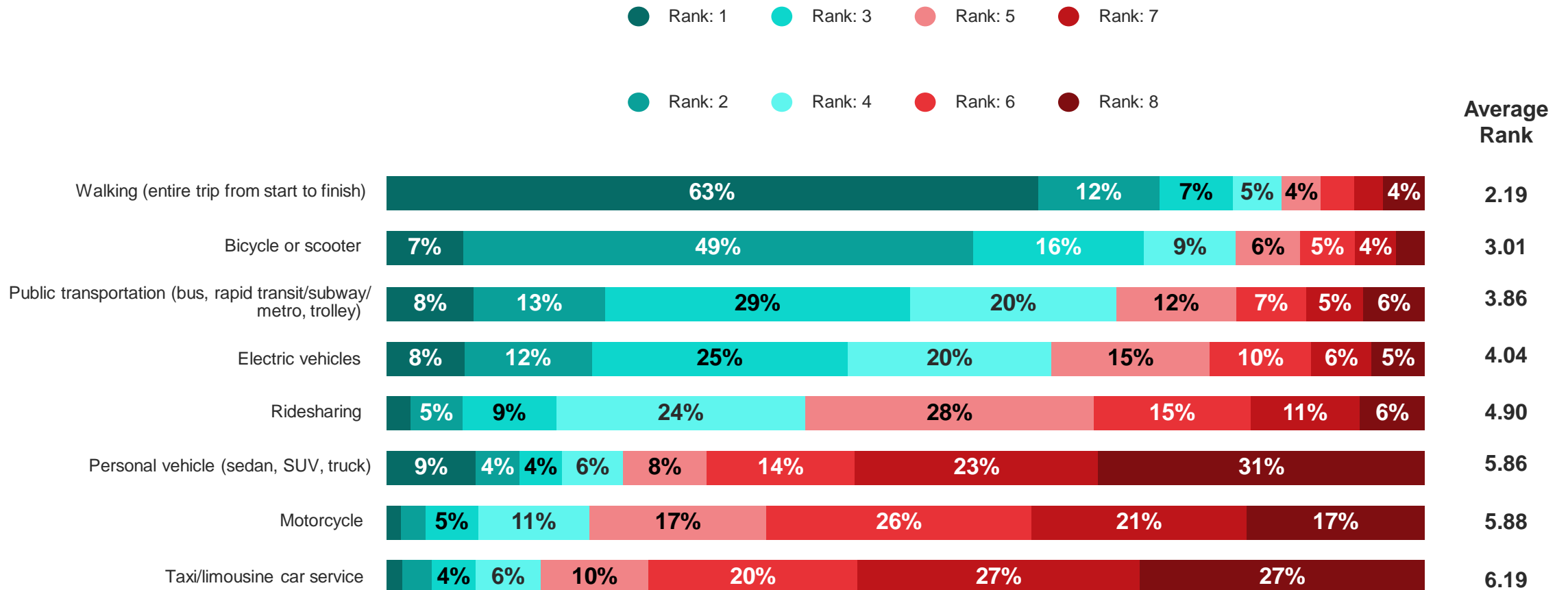
How often did you consider sustainability when choosing modes of transportation during the following time periods? [Showing % Very often + Somewhat often]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

On average, adults across cities rank taxis/limousine car services as the least sustainable transportation option for local commuting, and walking as the most sustainable option.

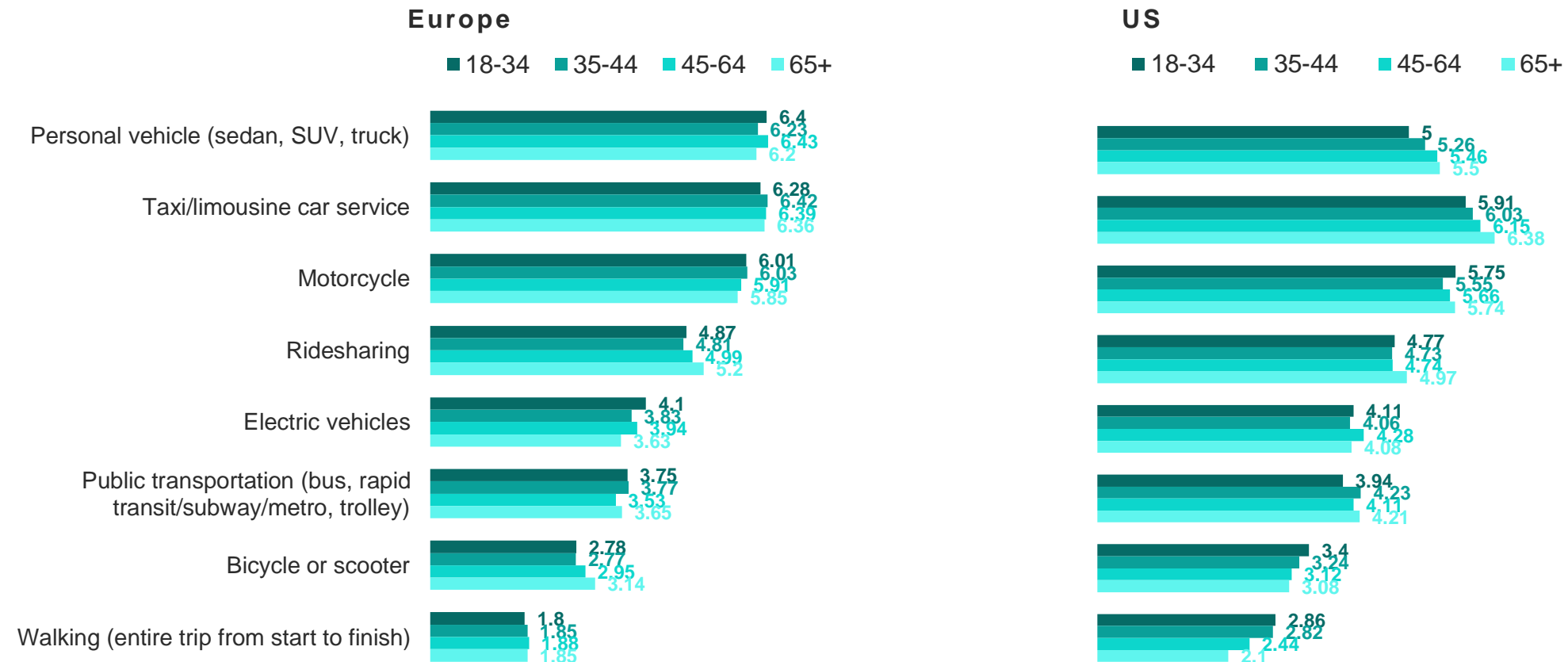
In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? Please rank in order from most sustainable at the top to least sustainable at the bottom, where 1 is most sustainable and 8 is least sustainable.



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

On average, Europeans across all age groups find personal vehicles to be less sustainable than Americans; and believe walking to be more sustainable than Americans.

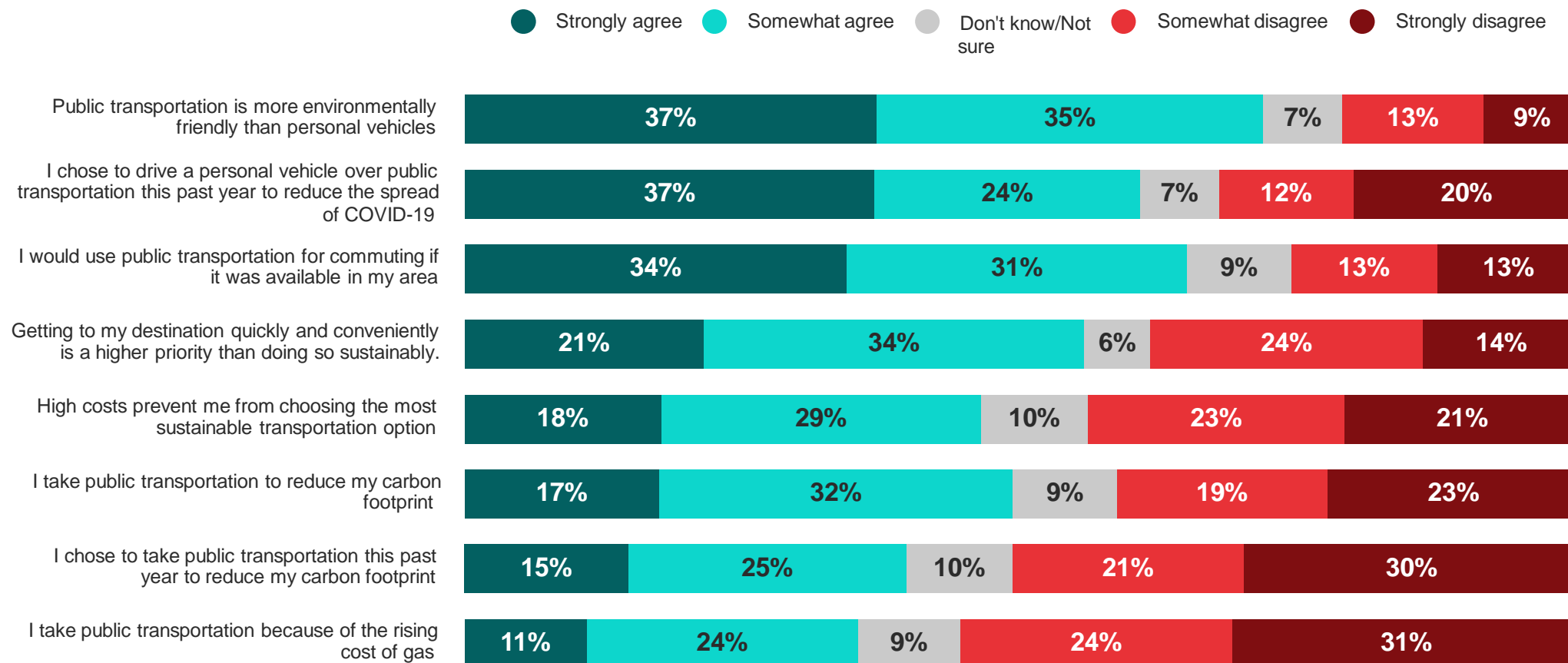
In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? Please rank in order from most sustainable at the top to least sustainable at the bottom, where 1 is most sustainable and 8 is least sustainable. **[Showing Average Rank]**



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Across countries, 72% agree that public transit is more environmentally friendly than personal vehicles. However, two thirds (61%) chose to drive a personal vehicle over public transit to reduce the spread of COVID-19.

To what extent do you agree with the following statements?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Notably, residents of Rome, San Francisco, and Chicago chose to drive personal vehicles over public transportation to reduce the spread of COVID-19, approximately 16-30% more than residents of Munich and London.

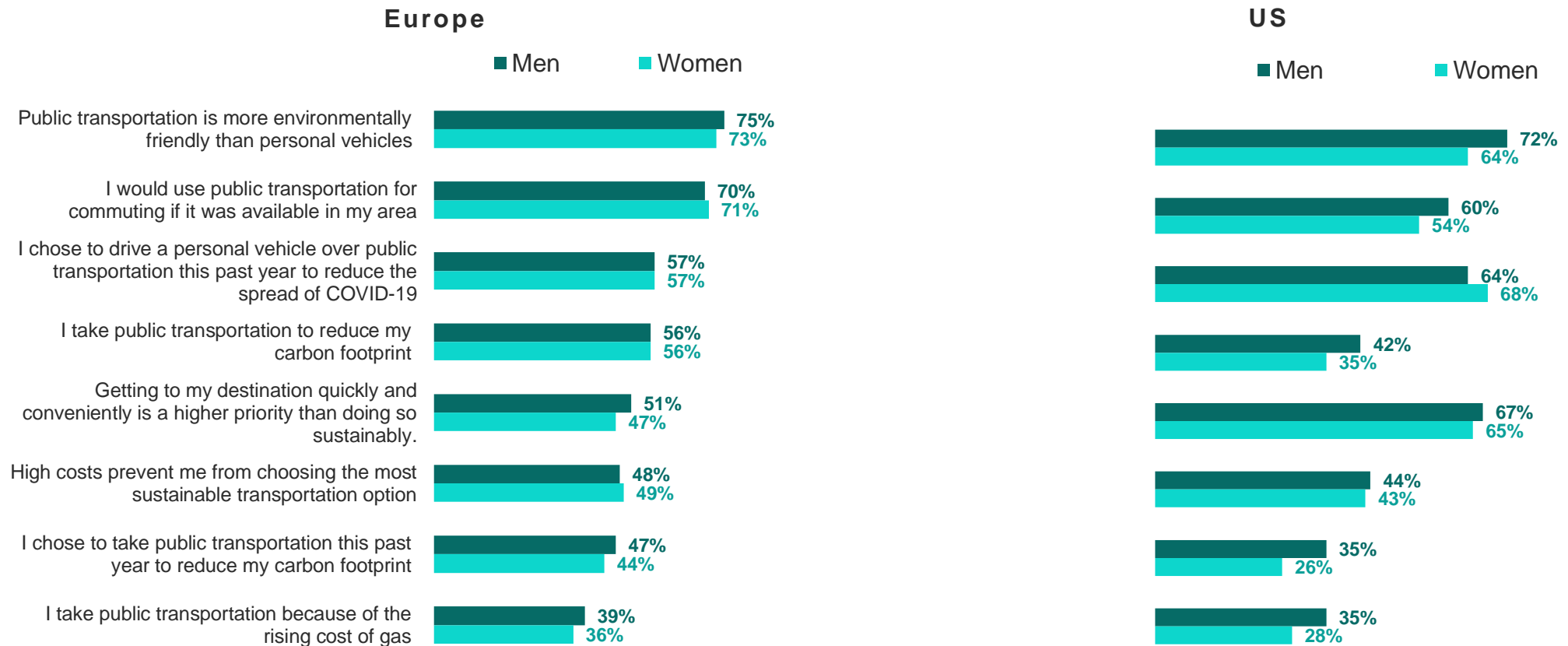
To what extent do you agree with the following statements? [Showing % Strongly agree + Somewhat agree]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Americans were more likely to focus on convenience and speed when making transit choices, and less likely than Europeans to consider the carbon impact. However, across cities, all agree that public transit is more environmentally friendly than person vehicles.

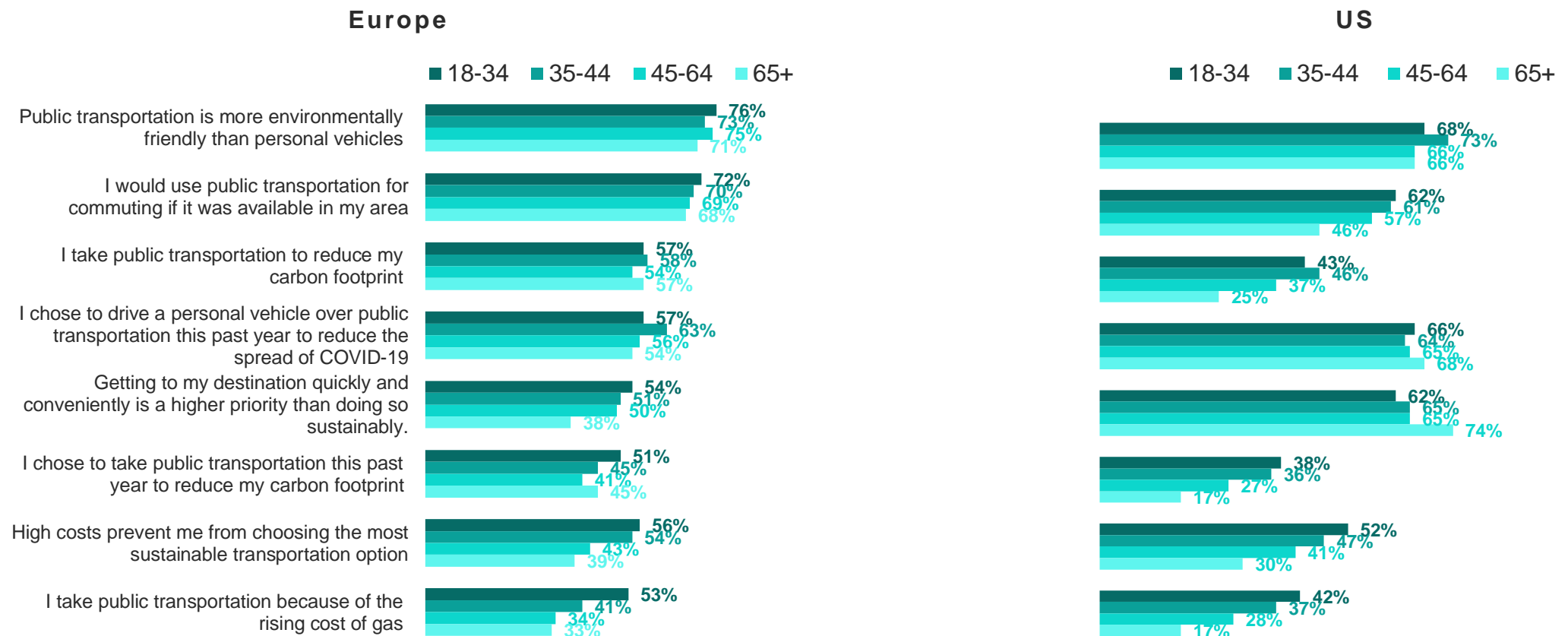
To what extent do you agree with the following statements? [Showing % Strongly agree + Somewhat agree]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Across cities, older individuals are less likely to see high costs (including gas prices) as a barrier to choosing the most sustainable transportation option.

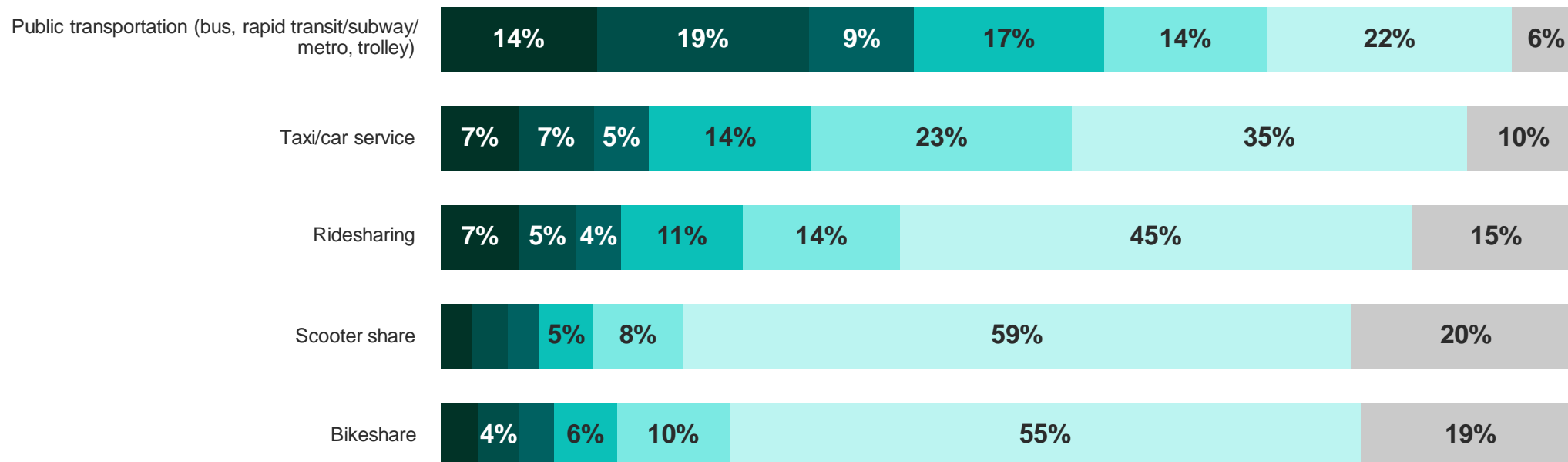
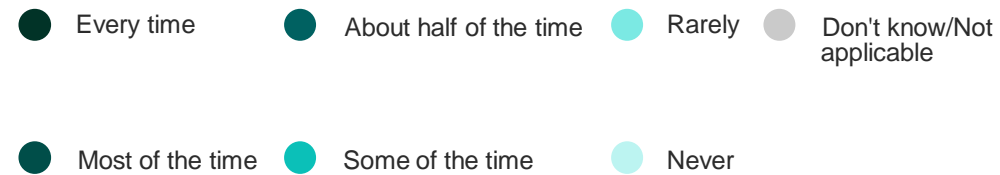
To what extent do you agree with the following statements? [Showing % Strongly agree + Somewhat agree]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Individuals across cities generally utilize mobile apps to help plan or book public transportation rides (59%) but are not really using it for scooter and bikeshare rides.

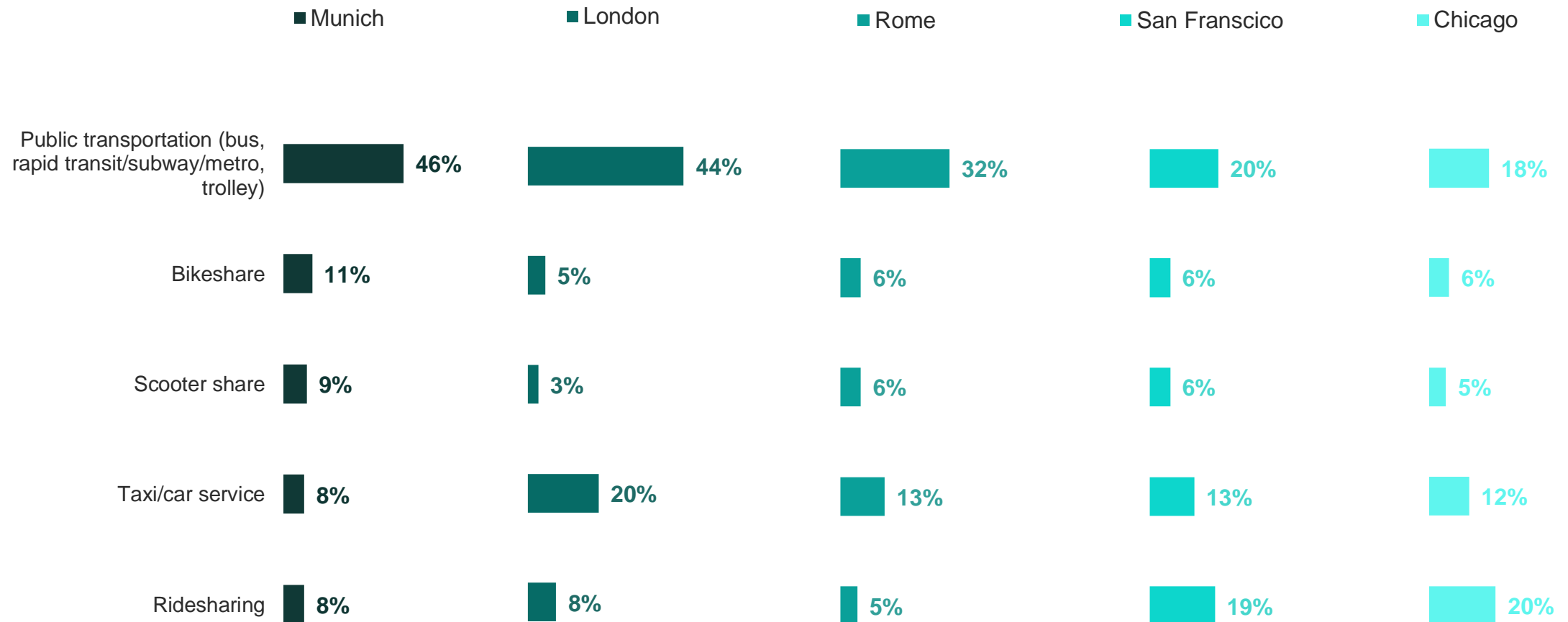
How often do you use mobile apps to plan or book the following modes of transportation?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Europeans use mobile apps almost 2x more frequently than Americans to book public transit.

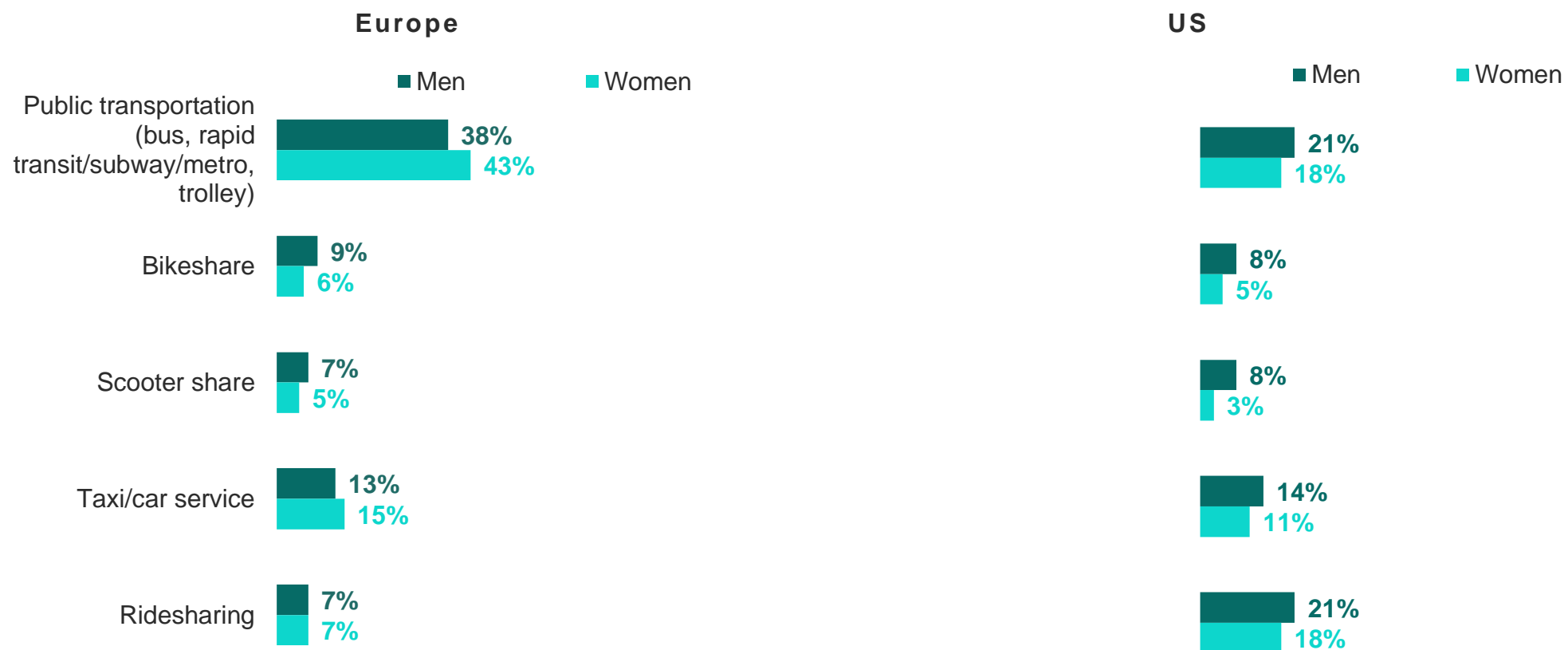
How often do you use mobile apps to plan or book the following modes of transportation? [Showing % Every time + Most of the time]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

American men and women use mobile apps for ride sharing approximately three times as much as European men and women. On the other hand, European men and women use mobile apps for public transportation close to twice as much as American men and women.

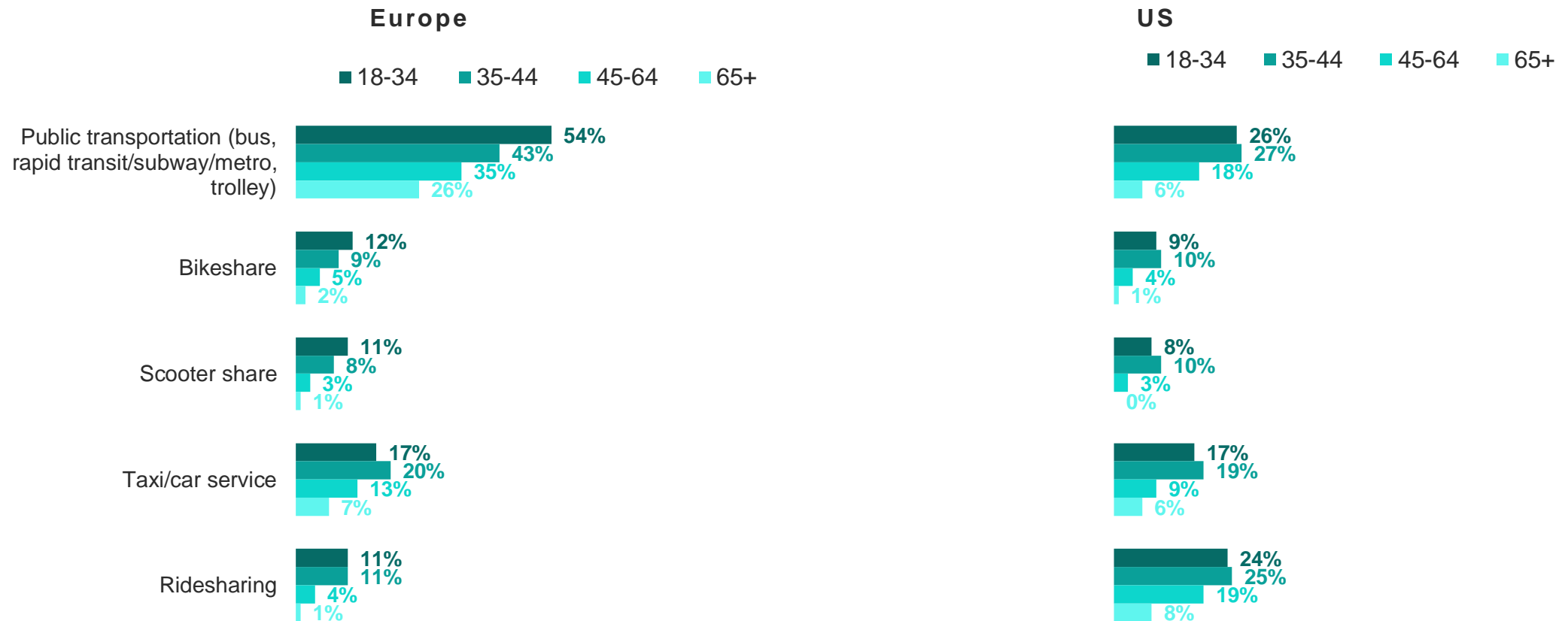
How often do you use mobile apps to plan or book the following modes of transportation? [Showing % Every time + Most of the time]



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Across Europe and America, 18-44-year-olds tend to lead those over 45 in using mobile app to plan or book transit. Europeans also lead Americans in their respective age groups in utilizing mobile apps for their most popular usage: booking public transportation.

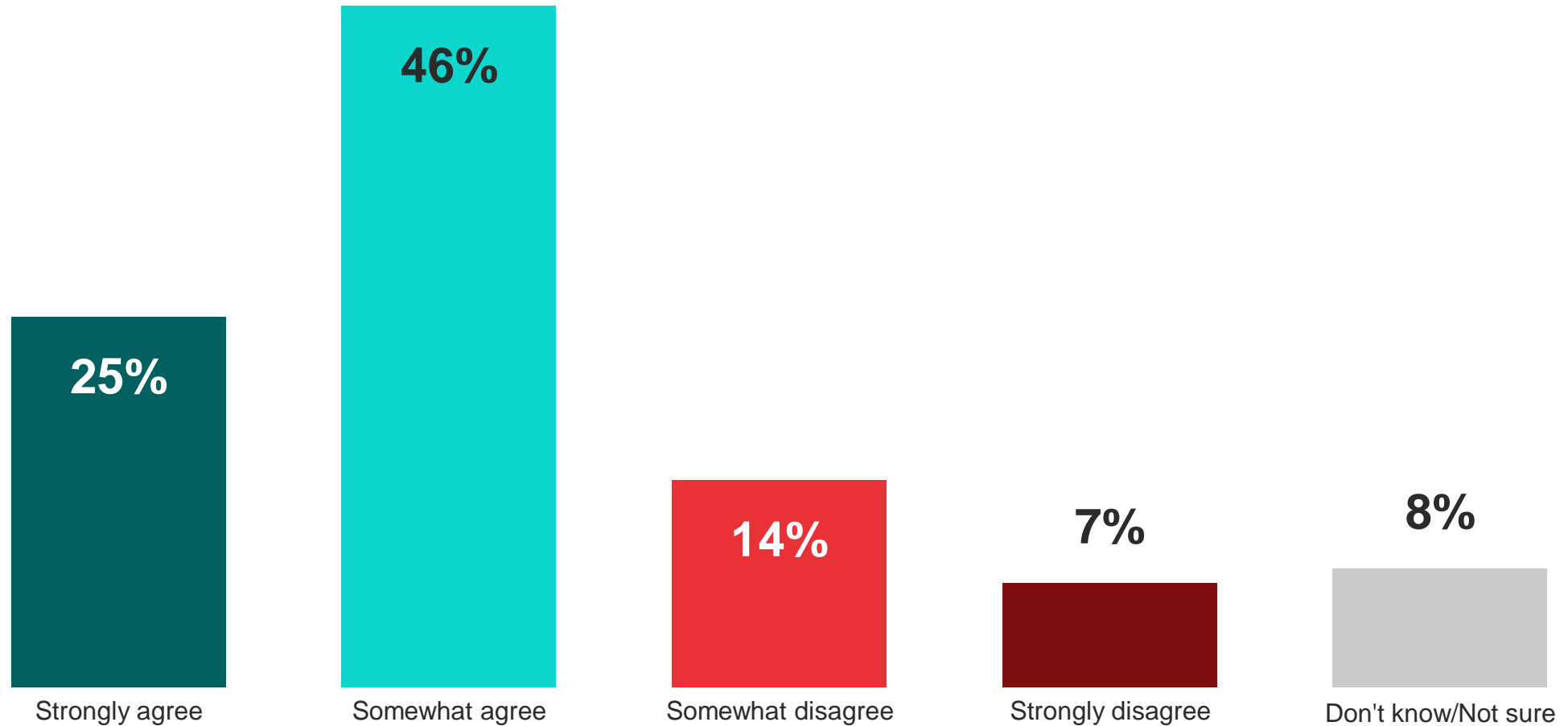
How often do you use mobile apps to plan or book the following modes of transportation?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

71% of Europeans and Americans agree that electric vehicles are a truly environmentally sustainable option for travel.

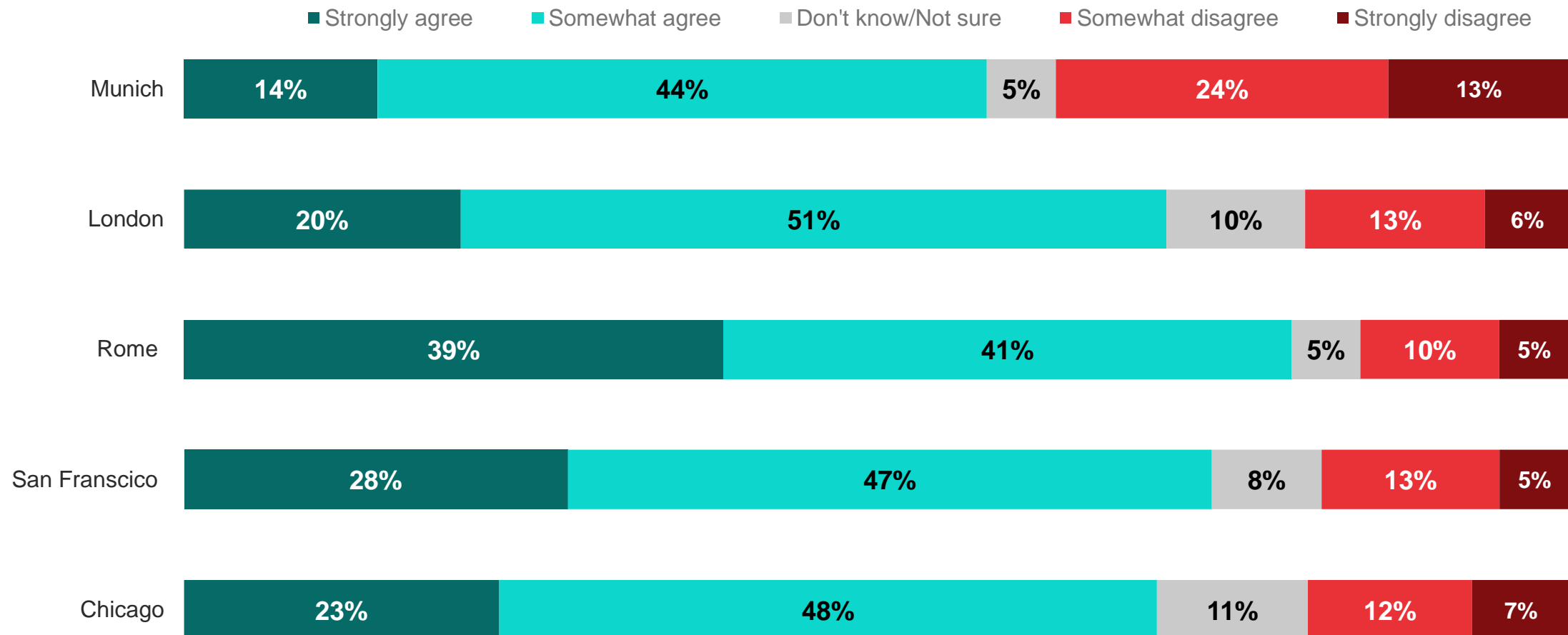
To what extent do you agree or disagree that electric vehicles are a truly environmentally sustainable option for travel?



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Aside from a large number of skeptics (37%) in Munich, Europeans and Americans generally tend to be in agreement that electric vehicles are a truly environmentally sustainable option for travel.

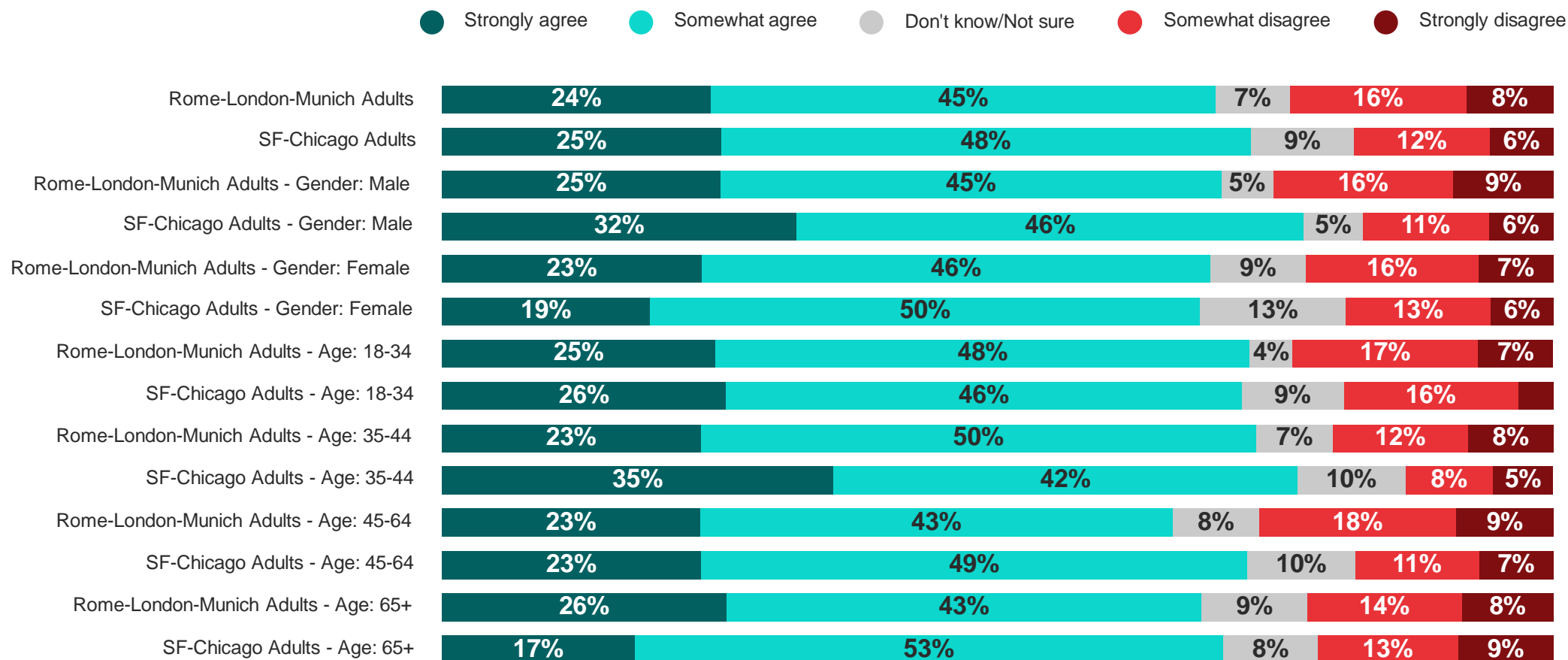
To what extent do you agree or disagree that electric vehicles are a truly environmentally sustainable option for travel?



ELECTRIC VEHICLE ATTITUDES

American men, more than both Europeans and American women, appear to be the most convinced (78%) that electric vehicles are a truly sustainable transit option.

To what extent do you agree or disagree that electric vehicles are a truly environmentally sustainable option for travel?



AGENDA

SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

ELECTRIC VEHICLE ATTITUDES

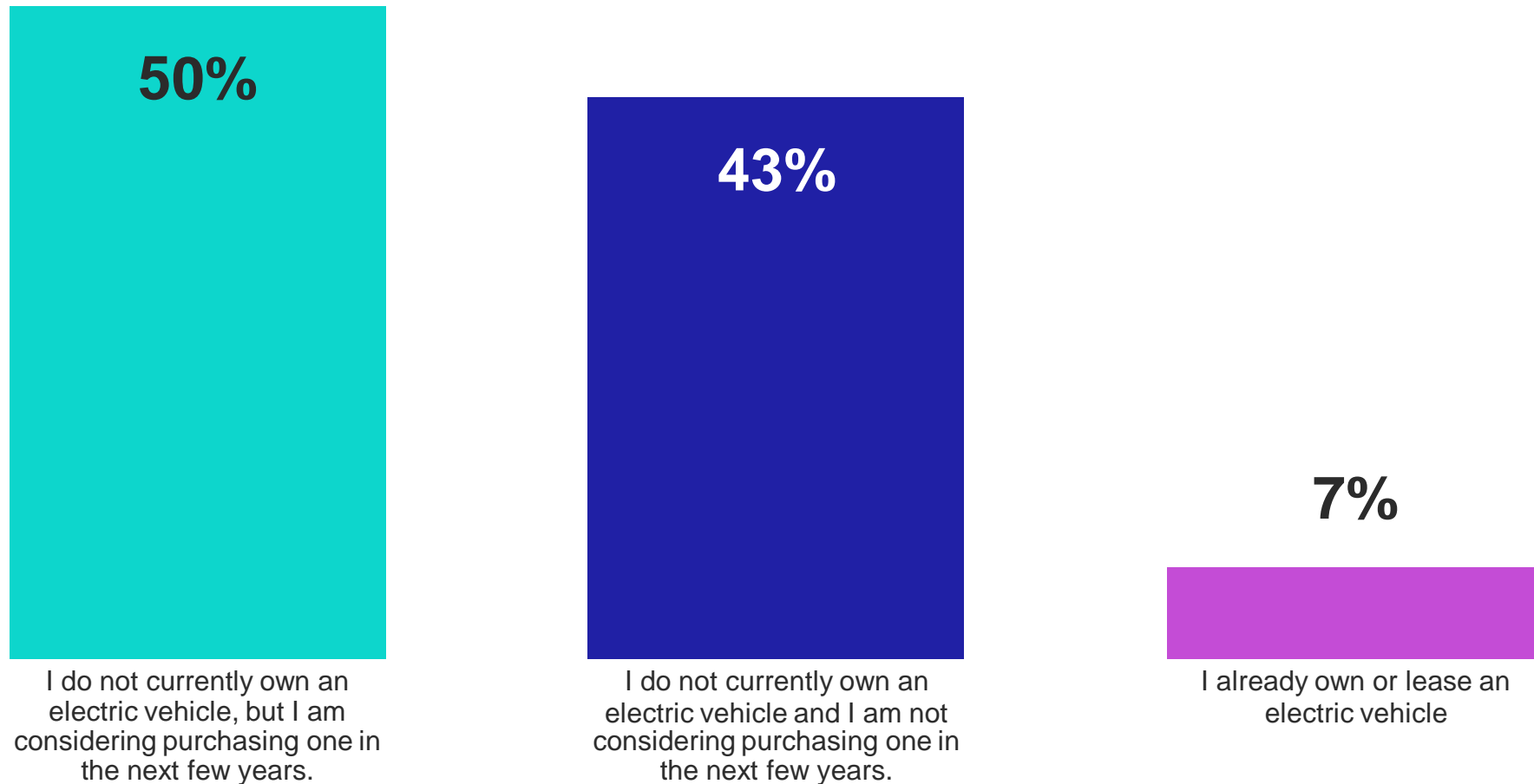
CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE



ELECTRIC VEHICLE ATTITUDES

More than half of all respondents in the five cities studied currently own or lease an electric vehicle or are considering purchasing one in the next few years.

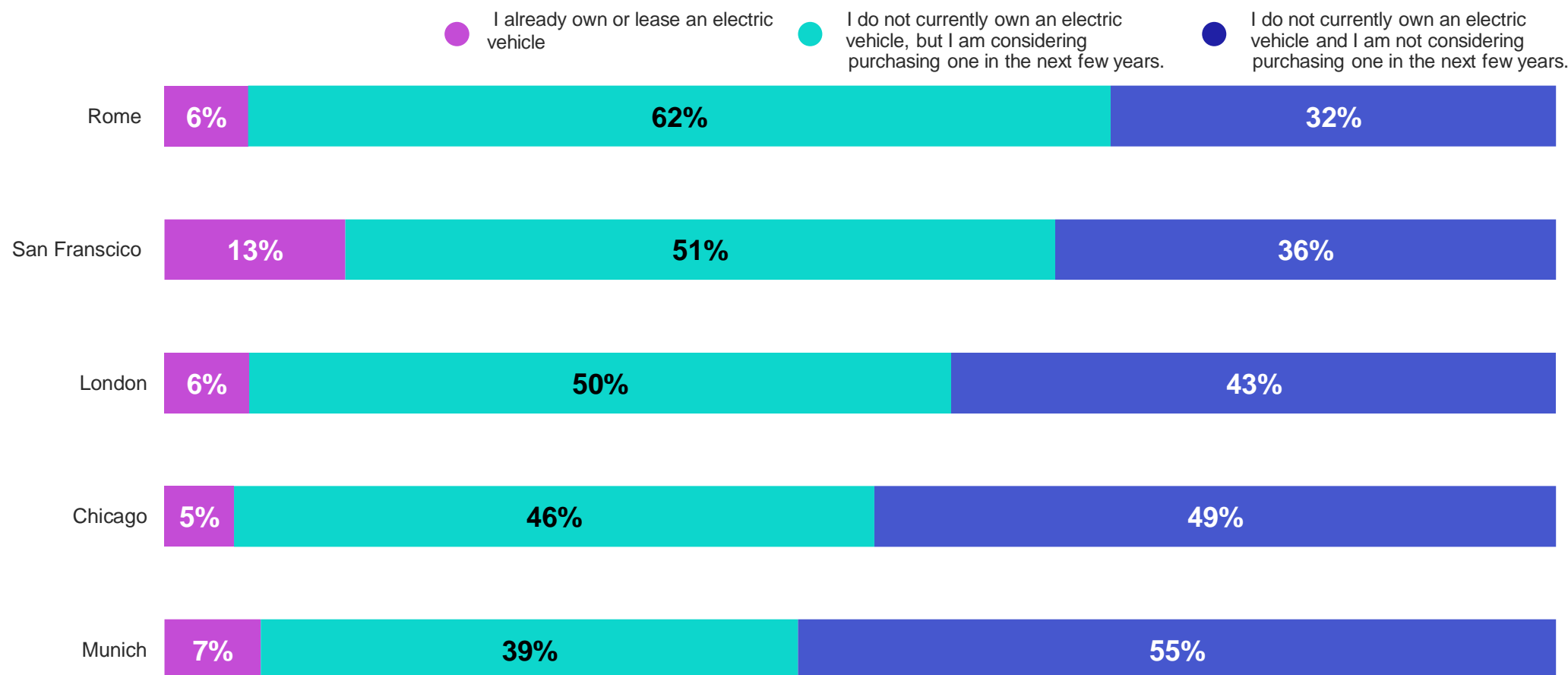
Which of the following statements best describes your view on buying electric vehicles?



ELECTRIC VEHICLE ATTITUDES

Respondents from Rome and San Francisco are most likely to already own an electric vehicle or consider purchasing one; more than half (55%) of Munich residents responded they do not plan to own or lease an EV in coming years.

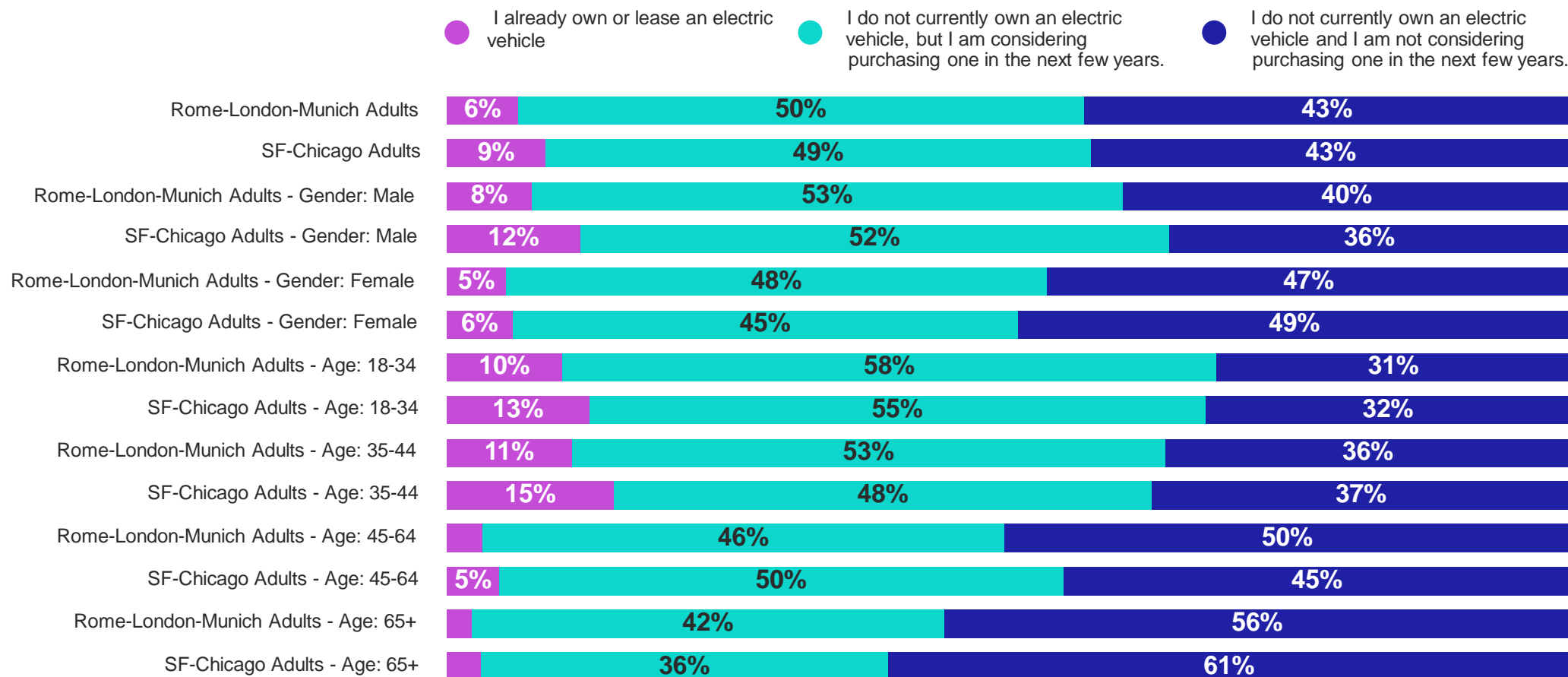
Which of the following statements best describes your view on buying electric vehicles?



ELECTRIC VEHICLE ATTITUDES

US males are most likely to own or consider owning an electric vehicle, and US and European adults 65+ are the least likely groups to consider owning an electric vehicle.

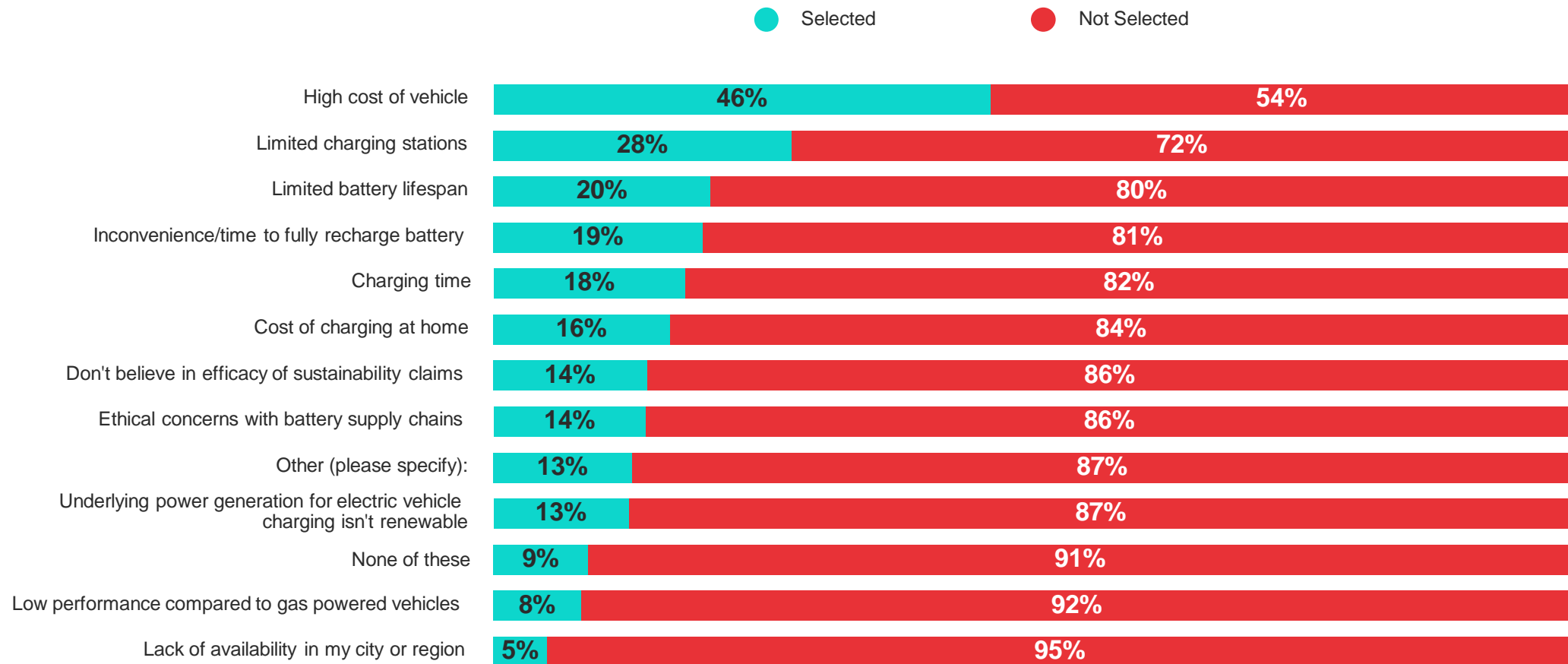
Which of the following statements best describes your view on buying electric vehicles?



ELECTRIC VEHICLE ATTITUDES

Cost and limited charging stations are the largest barriers preventing respondents from buying or leasing an electric vehicle.

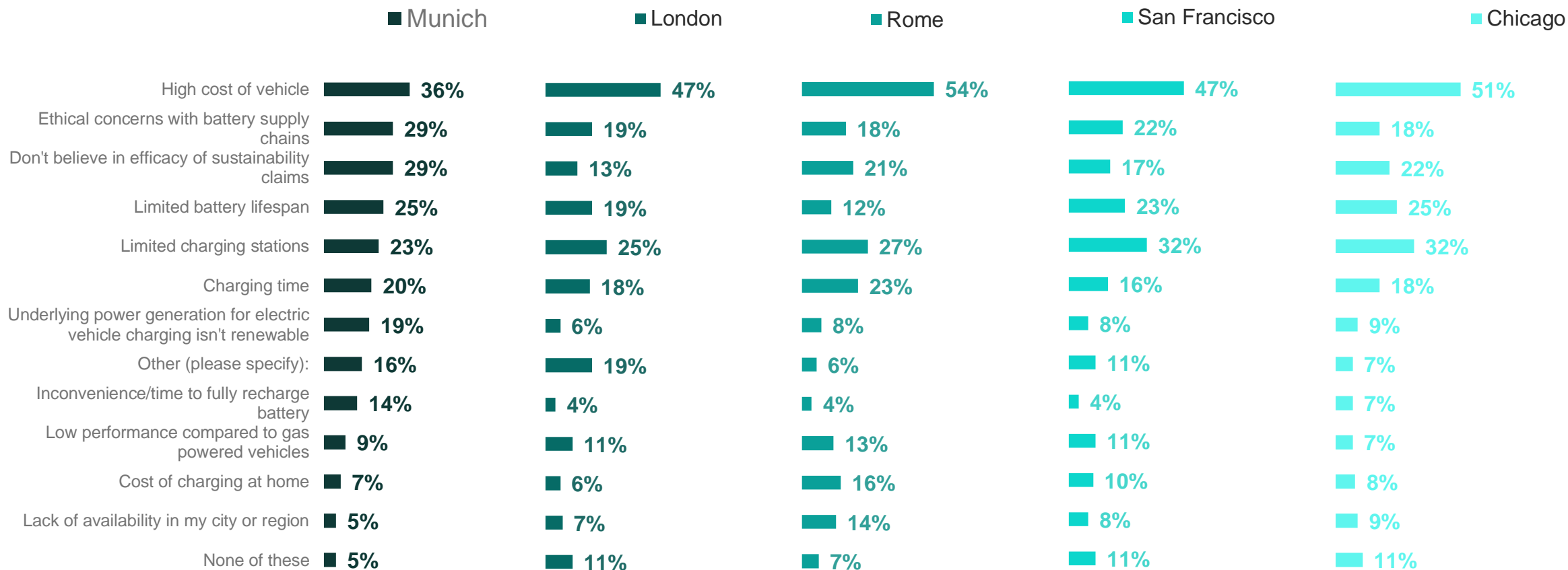
Which of the following are the largest barriers preventing you from buying or leasing an electric vehicle? Select no more than three.



ELECTRIC VEHICLE ATTITUDES

Cost is the top barrier across markets; however, in Munich, more than other cities, ethical concerns with battery production and efficacy claims are large barriers; lack of charging stations is a concern across markets but is a particularly large barrier in San Francisco and Chicago.

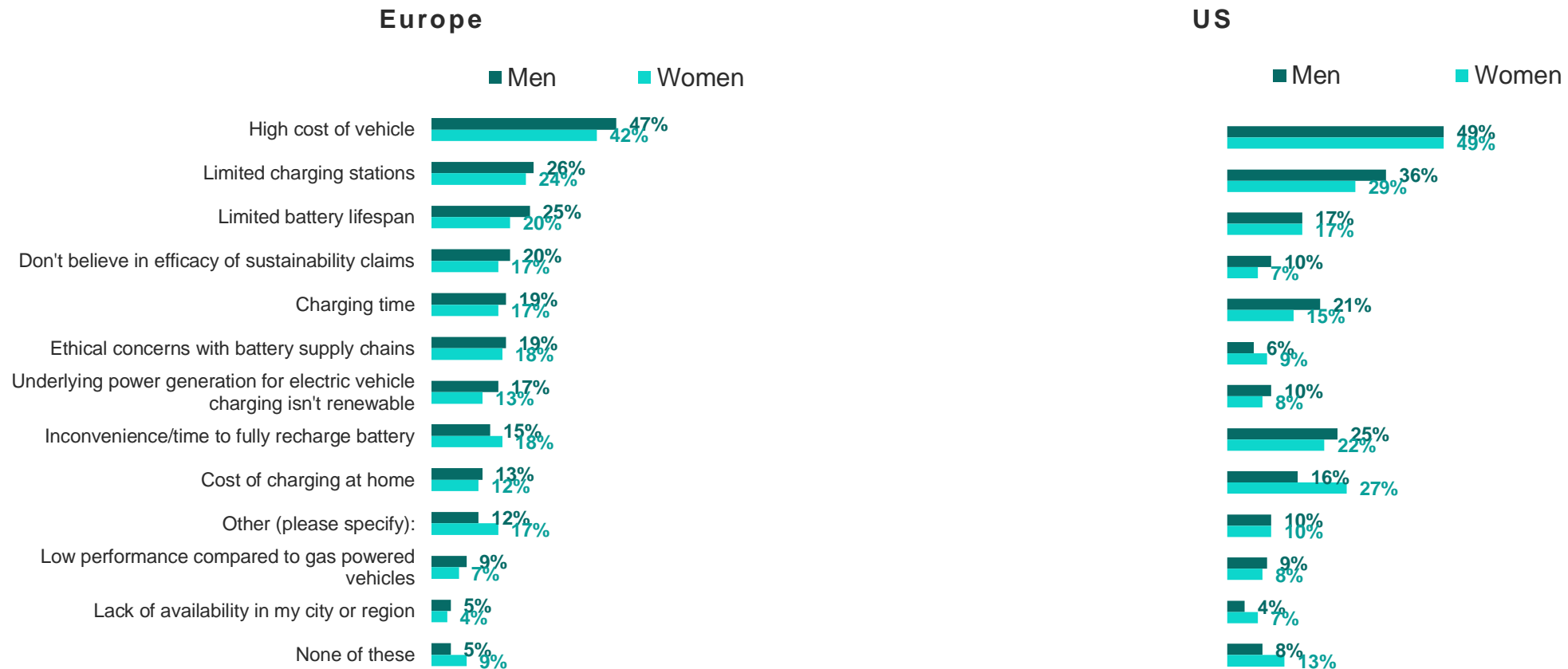
Which of the following are the largest barriers preventing you from buying or leasing an electric vehicle? Select no more than three.



ELECTRIC VEHICLE ATTITUDES

Cost is the biggest barrier across markets for men and women. Europeans are slightly more concerned with the sustainability of electric vehicles, while US adults are concerned with convenience and additional charges

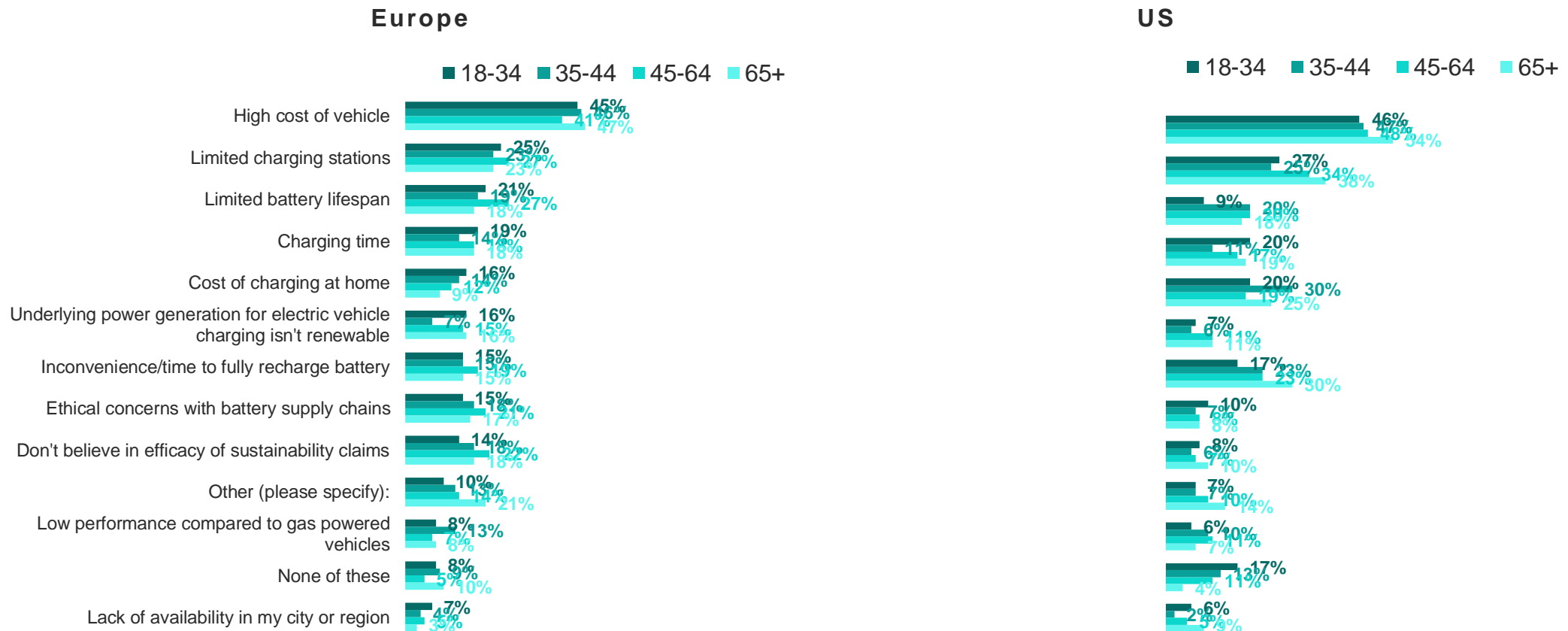
Which of the following are the largest barriers preventing you from buying or leasing an electric vehicle? Select no more than three.



ELECTRIC VEHICLE ATTITUDES

Across generations, high cost followed by limited charging stations are the largest barriers preventing European and US respondents from buying or leasing an electric vehicle.

Which of the following are the largest barriers preventing you from buying or leasing an electric vehicle? Select no more than three.



AGENDA

SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

ELECTRIC VEHICLE ATTITUDES

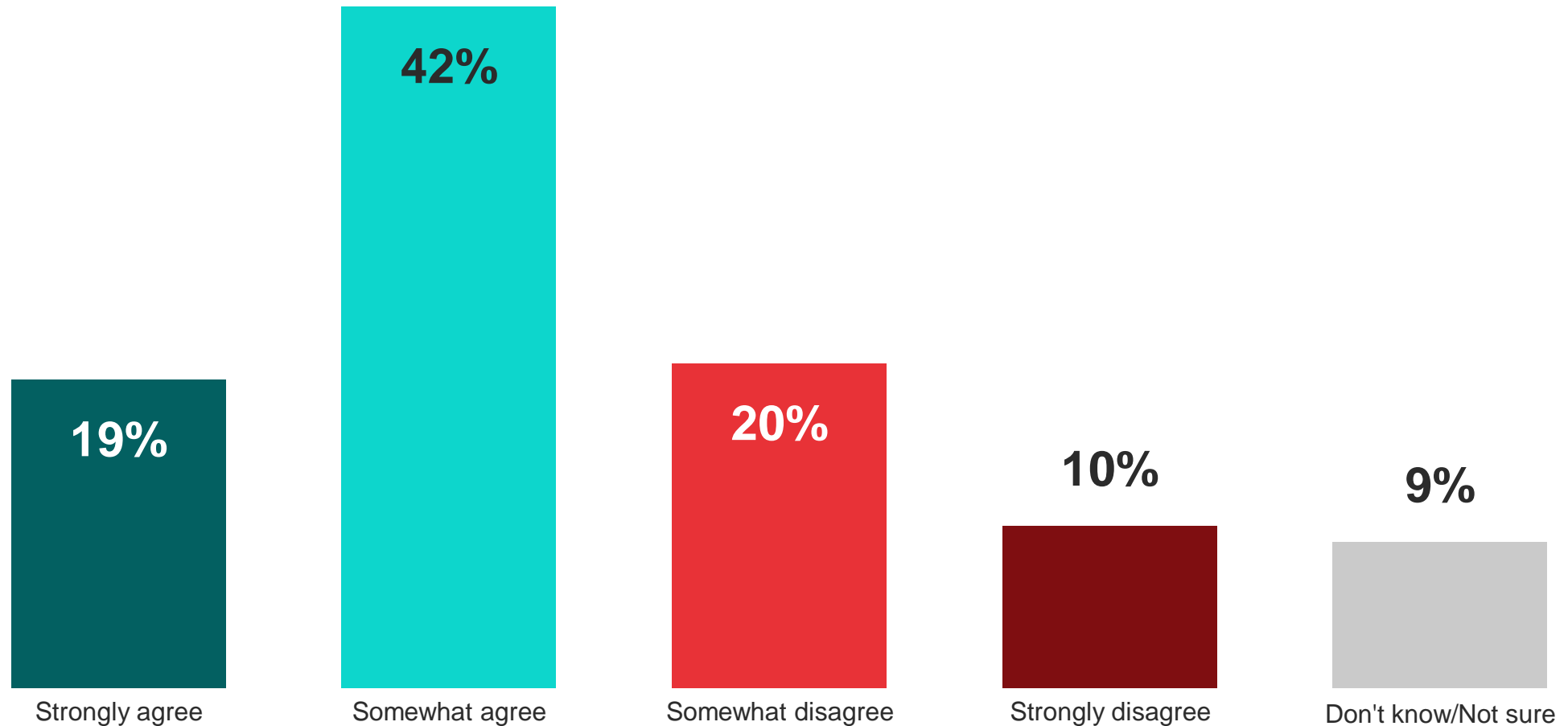
CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE



CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Strong majorities (61%) across markets agree that their city provides its citizens with environmentally sustainable transportation options.

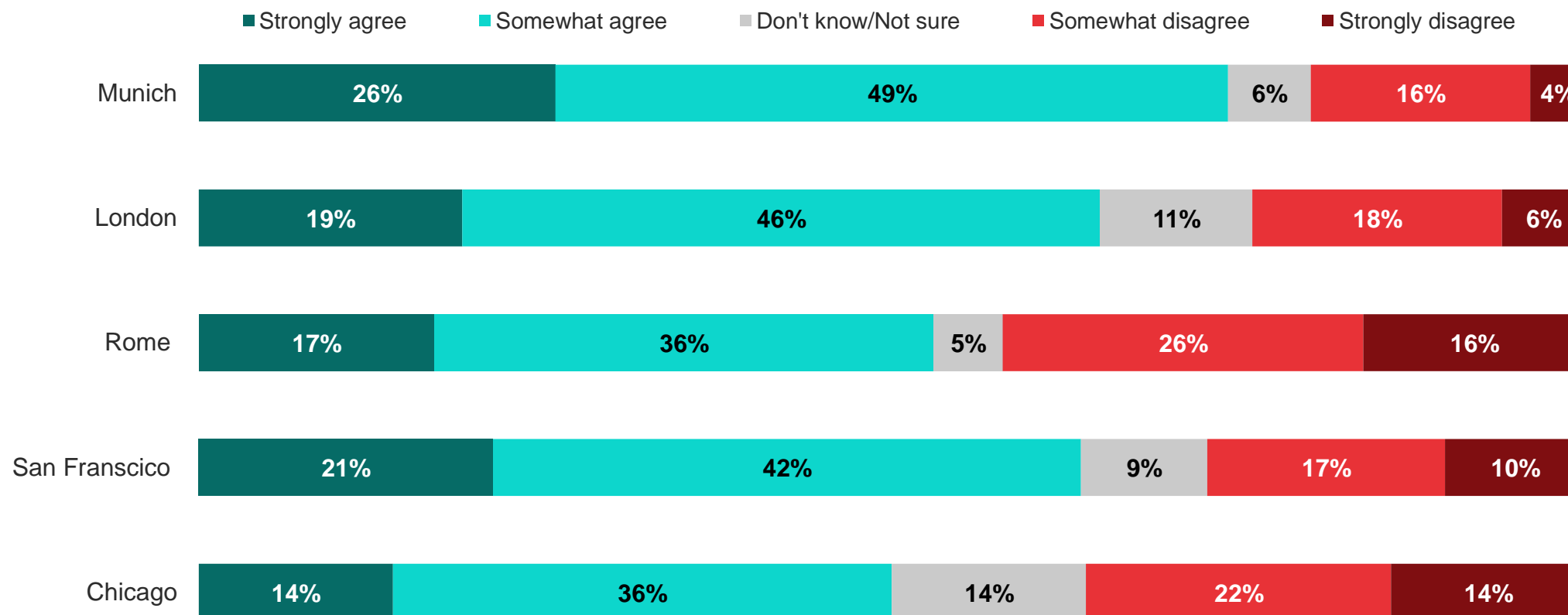
To what extent do you agree or disagree that your city provides its citizens with environmentally sustainable transportation options?



CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Munich (75%), London (64%), and SF (63%) adults broadly agree their cities provide citizens with sustainable transportation, compared to slimmer majorities in Rome (51%) and Chicago (50%).

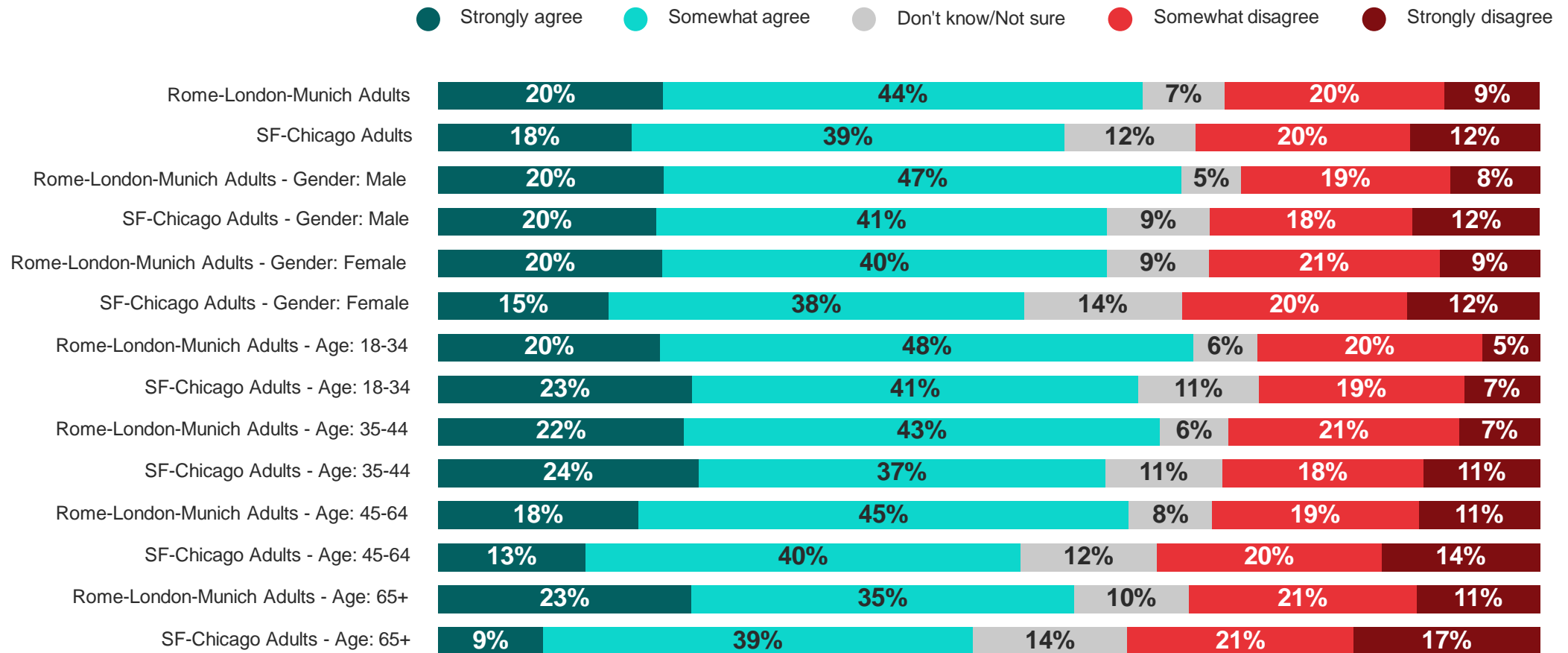
To what extent do you agree or disagree that your city provides its citizens with environmentally sustainable transportation options?



CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

European respondents are slightly more likely to agree their cities provide its citizens with environmentally sustainable options than American respondents.

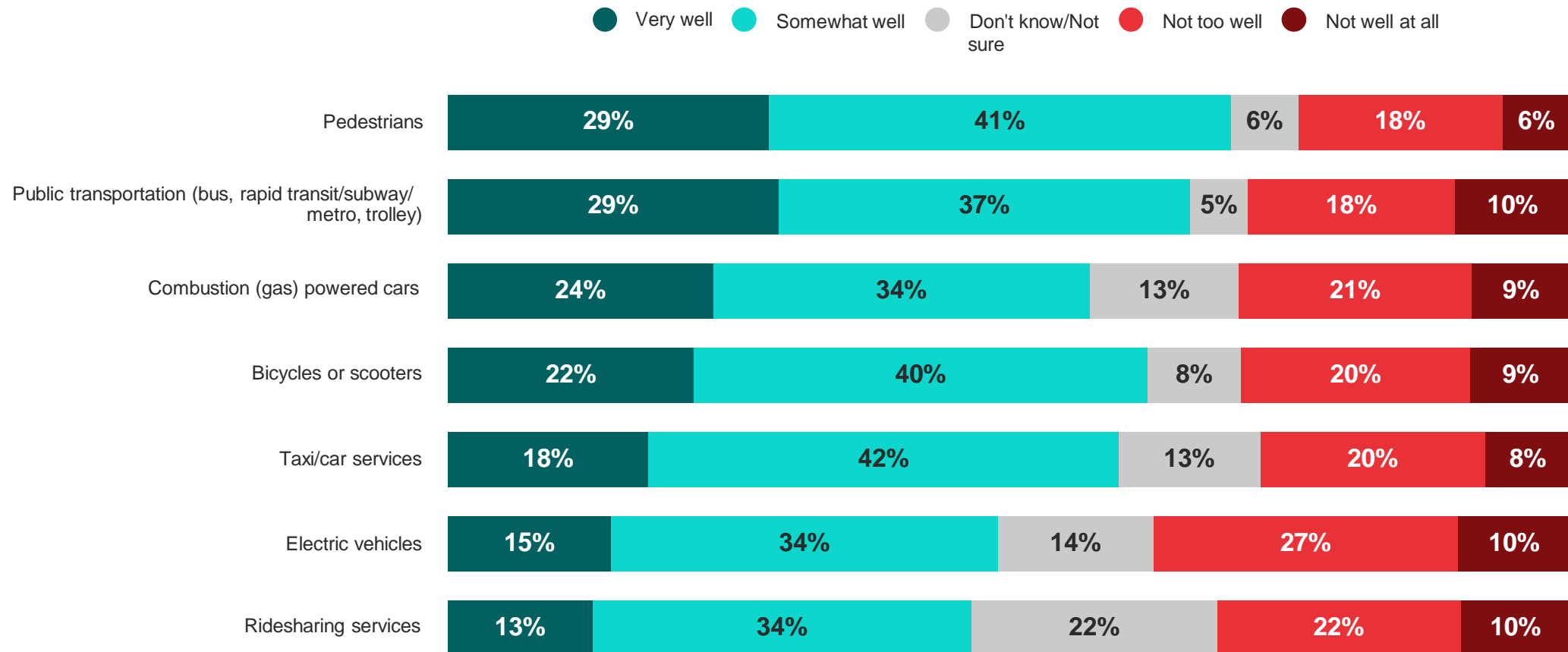
To what extent do you agree or disagree that your city provides its citizens with environmentally sustainable transportation options?



CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Majorities across markets believe their city supports pedestrian (70%), public transportation (66%), and bicycle or scooter (62%) infrastructure but lacks support for ridesharing and electric vehicles.

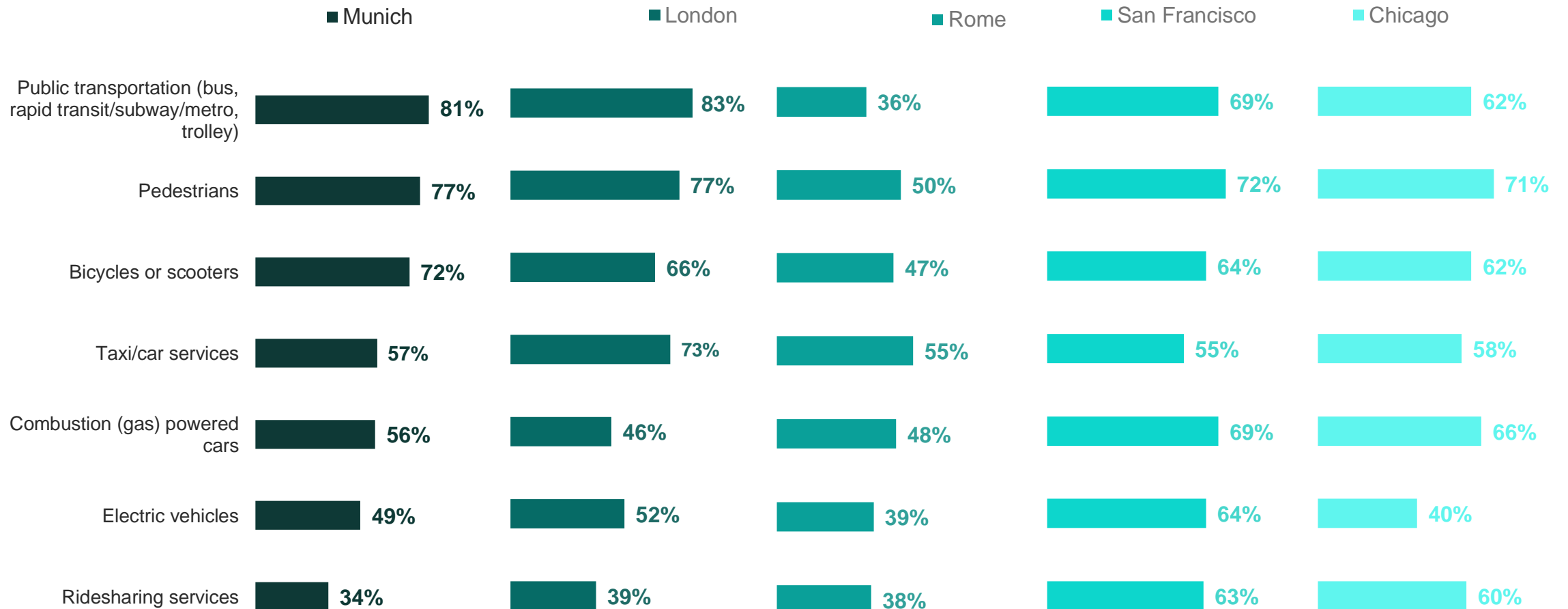
How well do you think your city's infrastructure supports the following transportation options?



CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Across markets, respondents think their city supports pedestrian and public transportation. However, respondents in Rome do not feel as strong as other cities

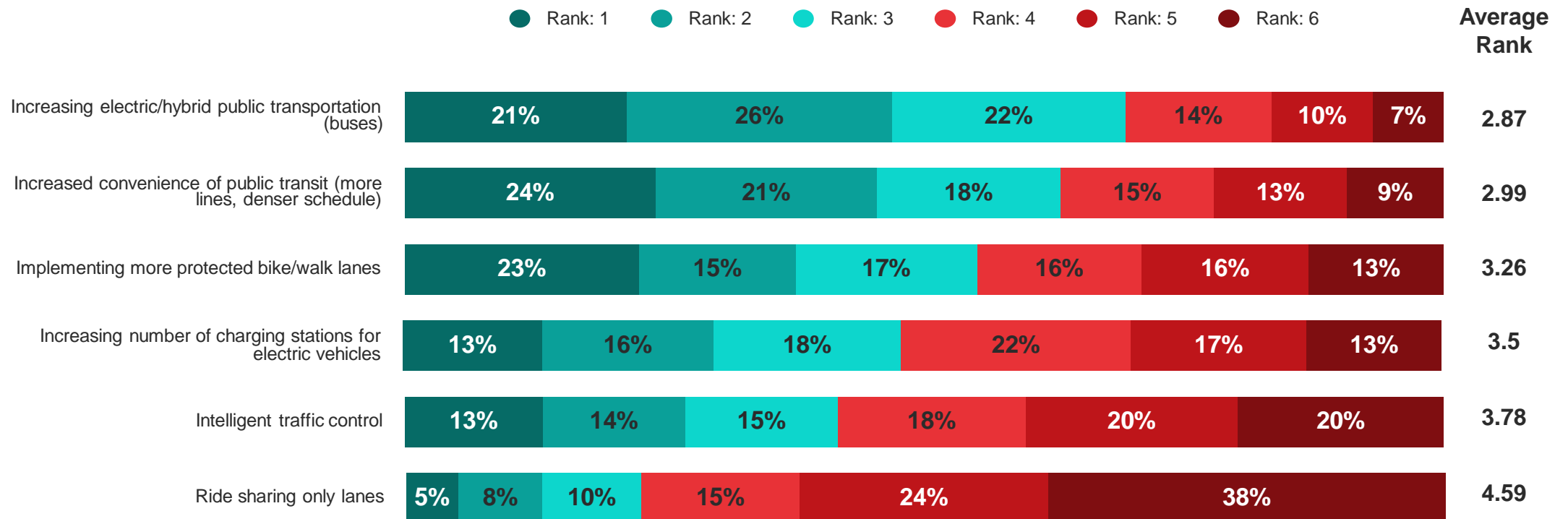
How well do you think your city's infrastructure supports the following transportation options?



CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Increased convenience of public transit and increasing electric/hybrid public transportation are ranked the most important to improve environmentally sustainable transportation options.

Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? Please rank the following options in order from most important at the top to least important at the bottom, where 1 is most important and 6 is least important.



ELECTRIC VEHICLE ATTITUDES

Across markets, increasing electric/hybrid public transportation is the most important initiative cited, except in Munich where increasing convenience of public transit is most important, ride sharing only lane is least important.

Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? Please rank the following options in order from most important at the top to least important at the bottom, where 1 is most important and 6 is least important.



ELECTRIC VEHICLE ATTITUDES

There are few differences between men and women when it comes to preferences for policy shifts to improve environmental sustainability in transportation.

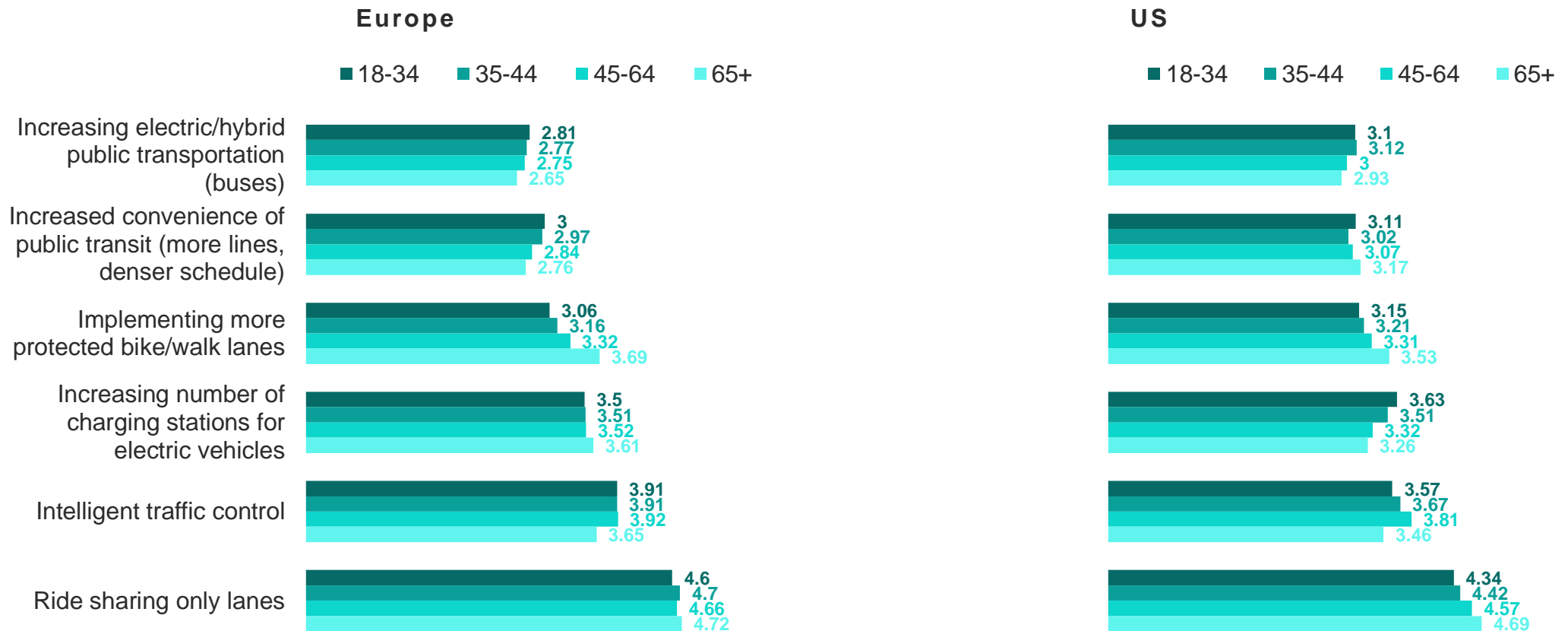
Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? Please rank the following options in order from most important at the top to least important at the bottom, where 1 is most important and 6 is least important.



ELECTRIC VEHICLE ATTITUDES

Across age groups, increasing electric/hybrid public transportation is seen as the most important initiative to implement to improve sustainable transportation options, followed by increased convenience of public transit.

Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? Please rank the following options in order from most important at the top to least important at the bottom, where 1 is most important and 6 is least important.



IBM DACH MOBILITY STUDY – CITY COMPARISON RESULTS

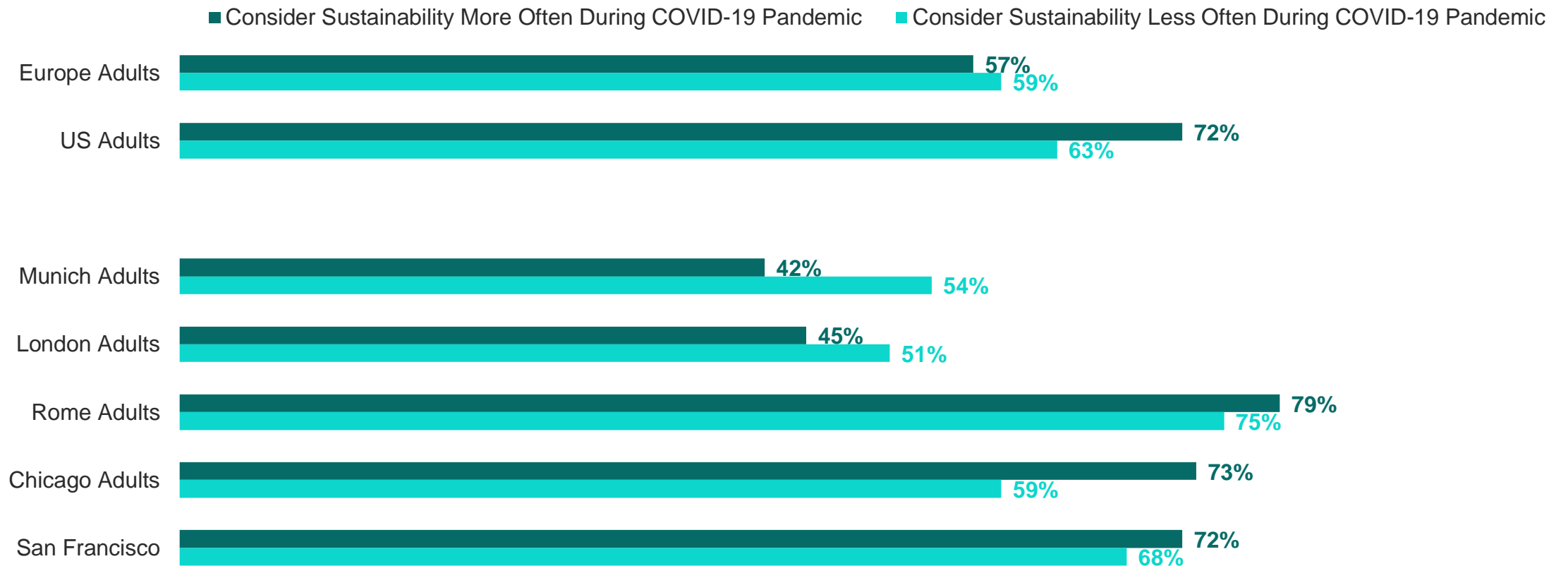
APPENDIX



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

In Munich and London, respondents who considered sustainability less often during the pandemic increased personal vehicle usage compared to those who considered sustainability more often during the pandemic. However, the reverse was true among respondents in Rome, Chicago, and San Francisco.

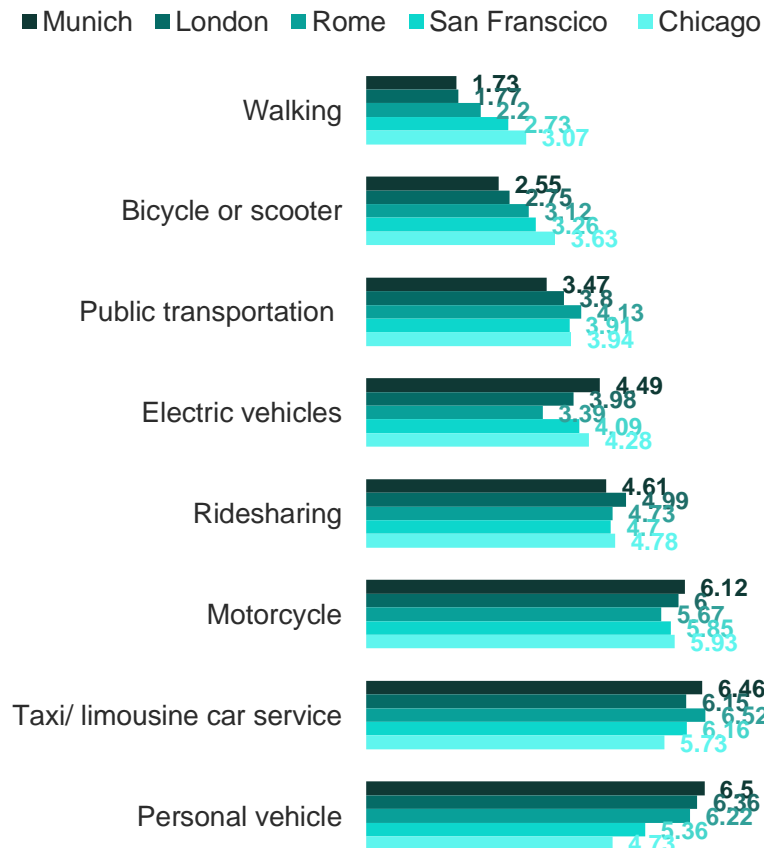
To what extent do you agree with the following statement? \ I chose to drive a personal vehicle over public transportation this past year to reduce the spread of COVID-19 [Showing % Strongly agree + Somewhat agree]



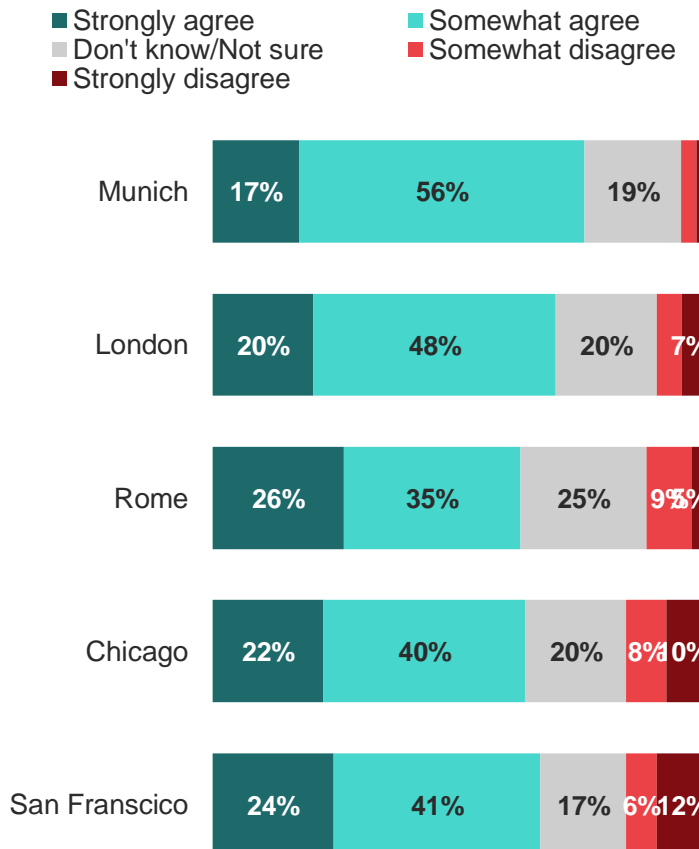
CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

Across all cities, respondents under 35 see walking and bicycle/scooter as the most sustainable commuting options followed by public transportation and electric vehicles. While a majority of respondents under 35 agree their city provides citizens with environmentally sustainable transportation options, increasing convenience of public transit and increasing electric/hybrid public transportation options are seen as areas for improvement.

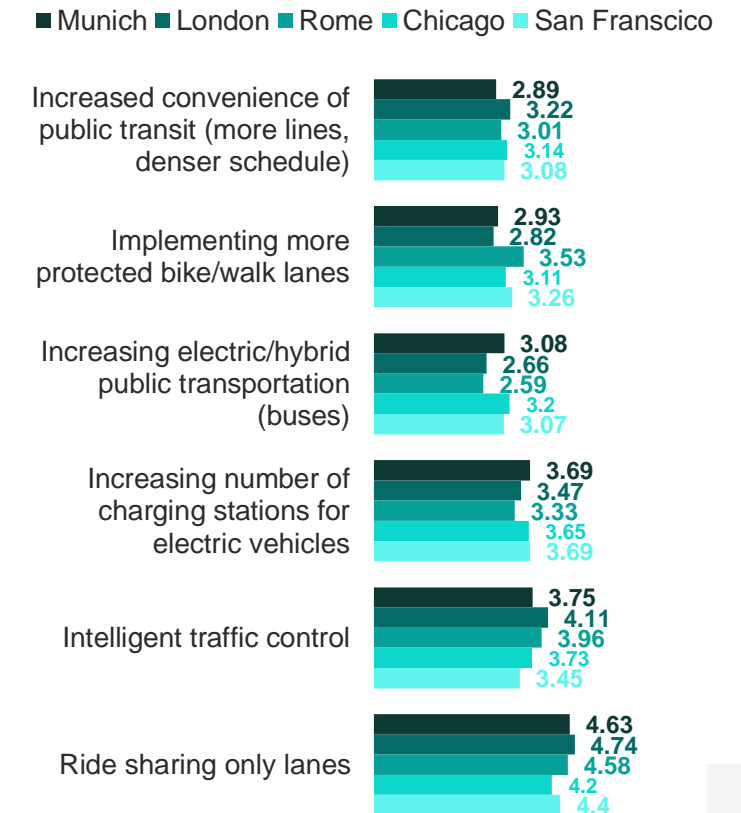
In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? [Showing Average Rank Among 18-34-Year-Old Respondents]



To what extent do you agree or disagree that your city provides its citizens with environmentally sustainable transportation options? [Among 18-34-Year-Old Respondents]



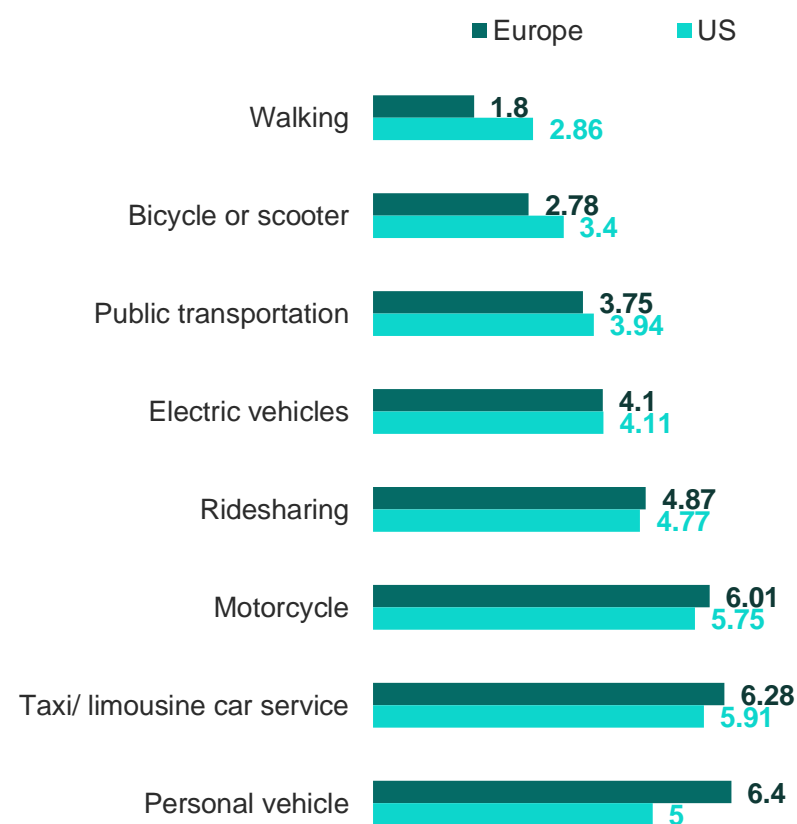
Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? [Showing Average Rank Among 18-34-Year-Old Respondents]



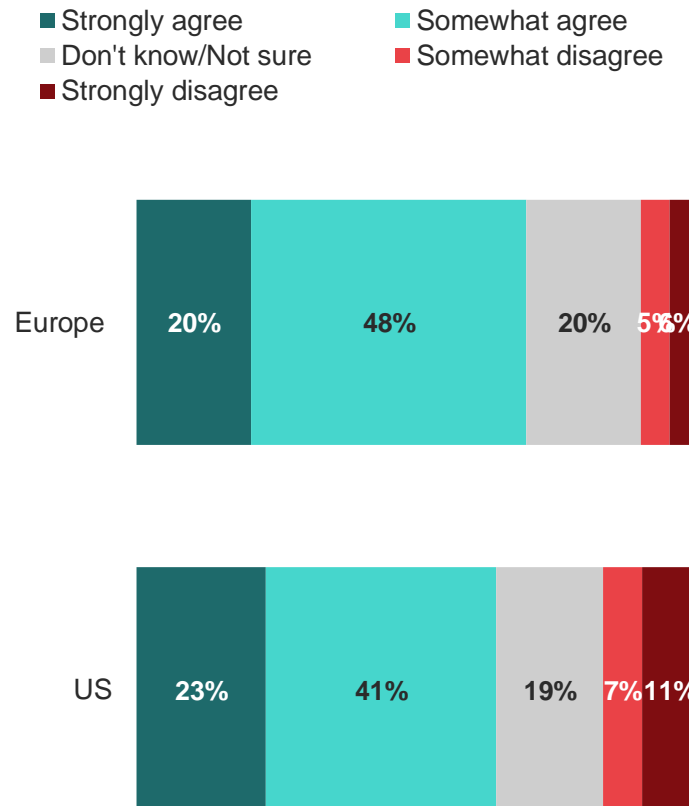
CITY SPECIFIC SUSTAINABLE TRANSPORTATION INFRASTRUCTURE

While walking and bicycle/scooter are seen as most sustainable options for commuting, public transportation and electric vehicles are ranked third and fourth, respectively. A majority of respondents under 35 in the US and Europe agree their city provides citizens with environmentally sustainable transportation options, but see increasing electric/hybrid public transportation and increased convenience of public transit as areas for improvement.

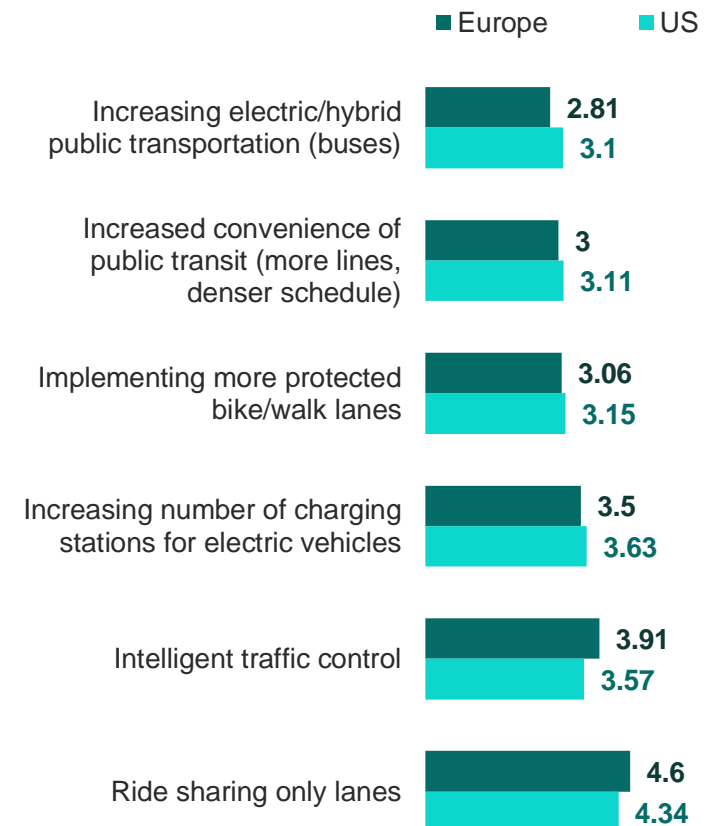
In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? [Showing Average Rank Among 18-34-Year-Old Respondents]



To what extent do you agree or disagree that your city provides its citizens with environmentally sustainable transportation options? [Among 18-34-Year-Old Respondents]



Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? [Showing Average Rank Among 18-34-Year-Old Respondents]

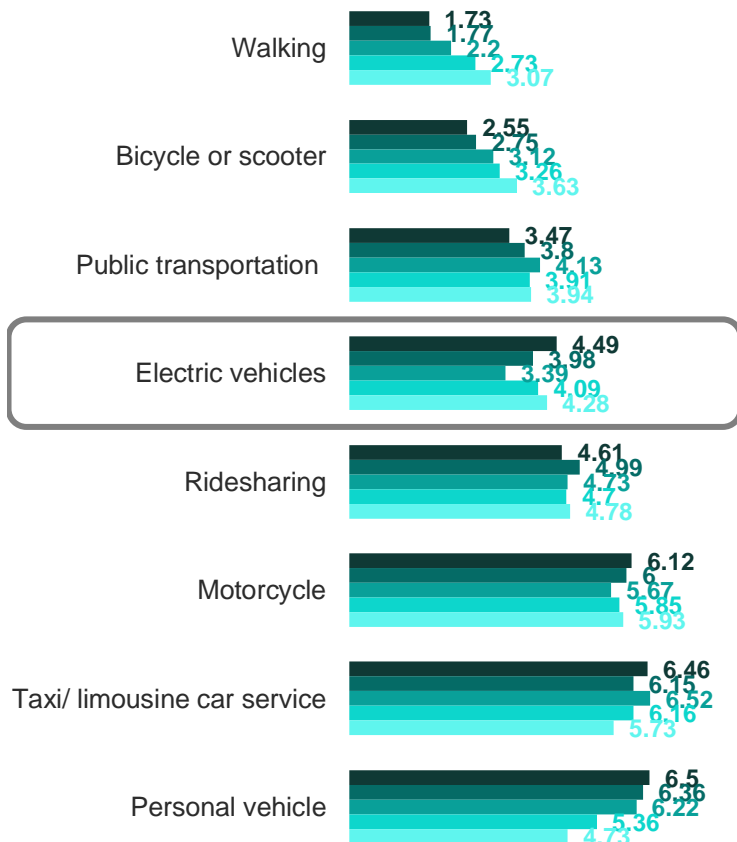


ELECTRIC VEHICLE ATTITUDES

Across all cities, respondents under 35 agree electric vehicles are a truly sustainable option for travel but do not see it as the most sustainable option for commuting locally. A plurality are considering purchasing an electric vehicle in the next few years, but cost is the primary barrier.

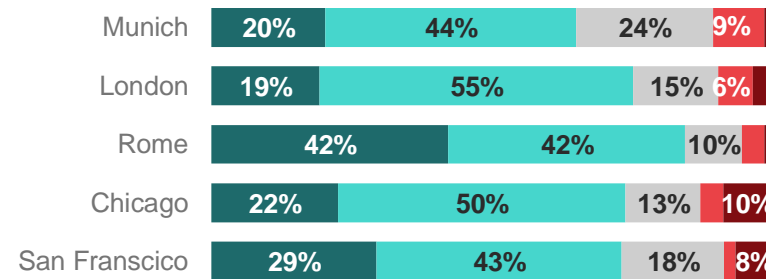
In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? [Showing Average Rank Among 18-34-Year-Old Respondents]

■ Munich ■ London ■ Rome ■ San Francisco ■ Chicago



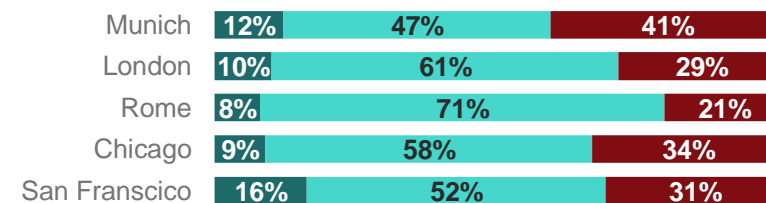
To what extent do you agree or disagree that electric vehicles are a truly environmentally sustainable option for travel? [Among 18-34-Year-Old Respondents]

■ Strongly agree ■ Somewhat agree ■ Don't know/Not sure ■ Somewhat disagree ■ Strongly disagree



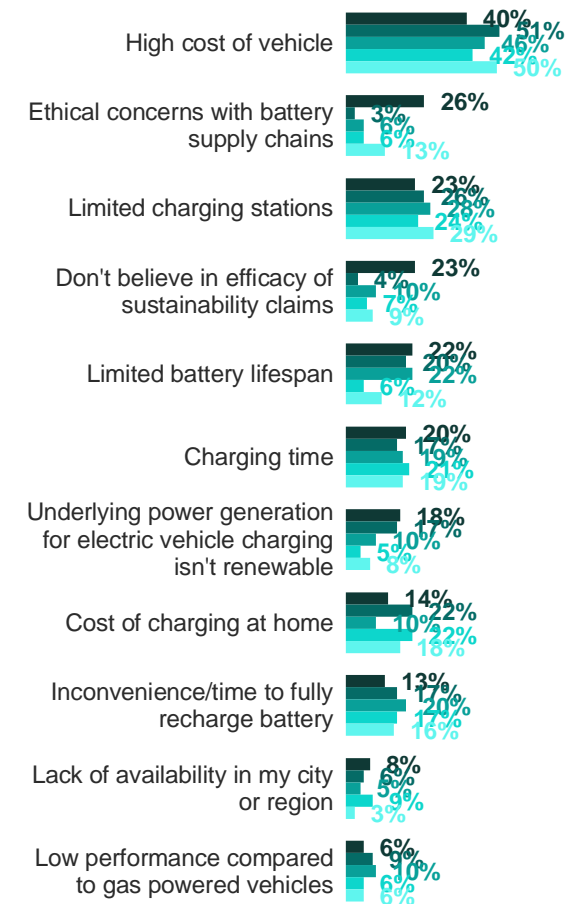
Which of the following statements best describes your view on buying electric vehicles? [Among 18-34-Year-Old Respondents]

■ I already own or lease an electric vehicle
 ■ I do not currently own an electric vehicle, but I am considering purchasing one in the next few years.
 ■ I do not currently own an electric vehicle and I am not considering purchasing one in the next few years.



Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? [Among 18-34-Year-Old Respondents]

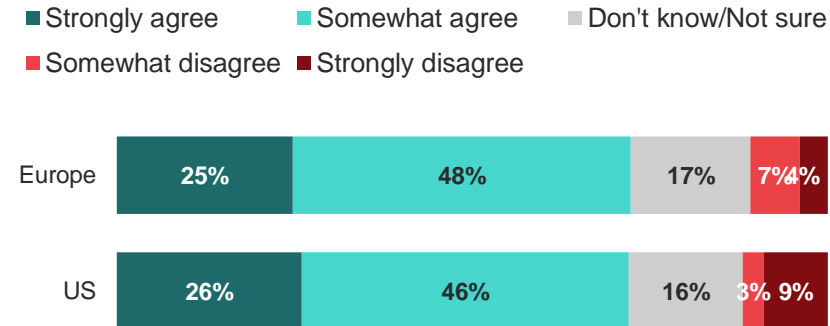
■ Munich ■ London ■ Rome ■ Chicago ■ San Francisco



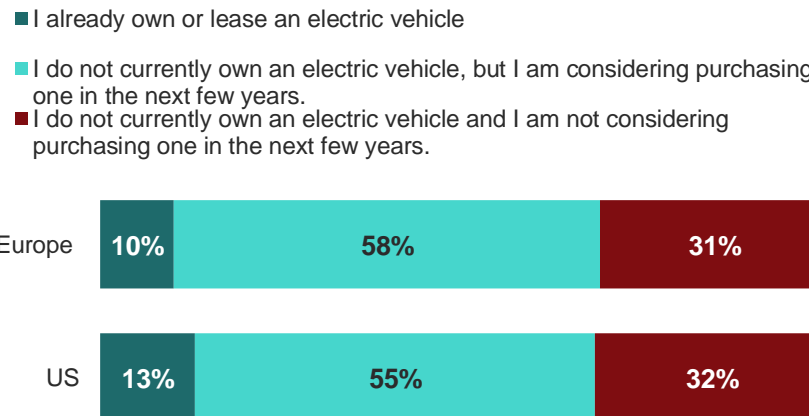
ELECTRIC VEHICLE ATTITUDES

A majority of respondents under 35 in Europe and the US agree electric vehicles are an environmentally sustainable option for travel, but do not see it as the most sustainable option for local commuting. Over half are considering purchasing an electric vehicle in the next few years, but a plurality cite high cost as the primary barrier.

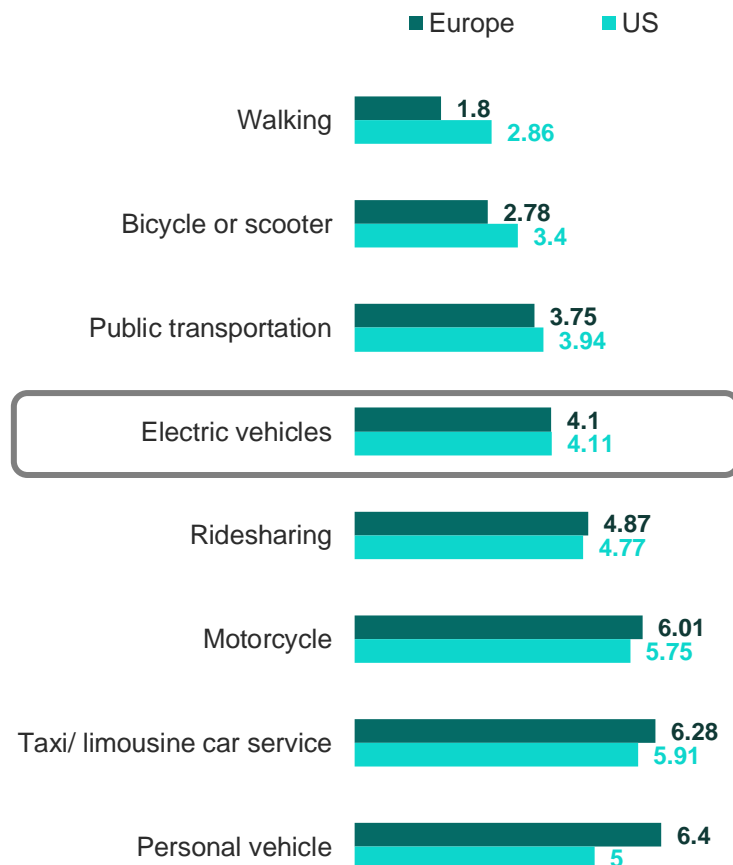
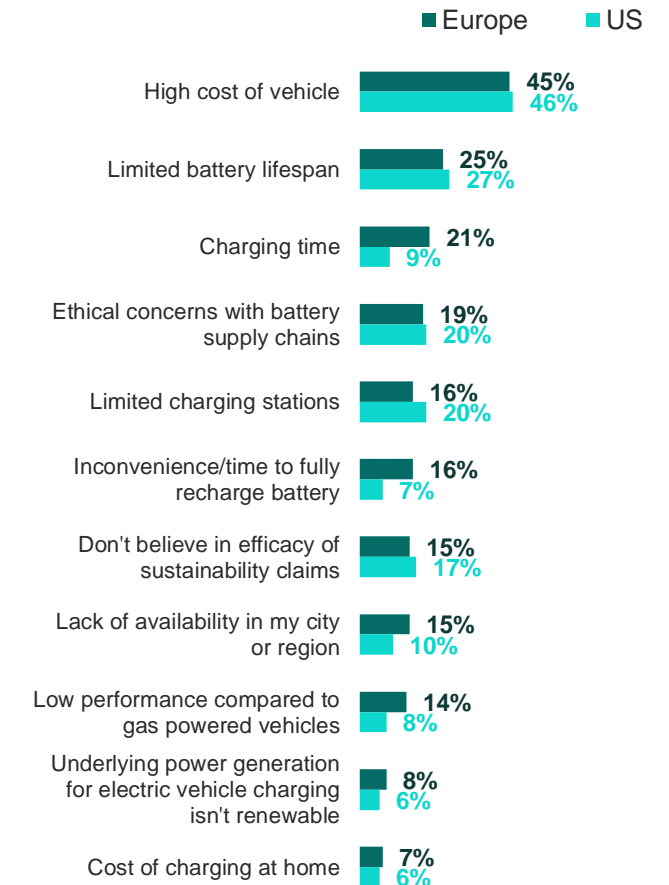
To what extent do you agree or disagree that electric vehicles are a truly environmentally sustainable option for travel? **[Among 18-34-Year-Old Respondents]**



Which of the following statements best describes your view on buying electric vehicles? **[Among 18-34-Year-Old Respondents]**



Which of the following options do you think are most important for your city to implement to improve environmentally sustainable transportation options? **[Among 18-34-Year-Old Respondents]**



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

Across European and American cities, there are mixed feelings on sustainability when it comes to electric vehicles vs public transportation – most notably, those in Rome rank electric vehicles as on par with biking, while other markets see them as less sustainable than public transit.

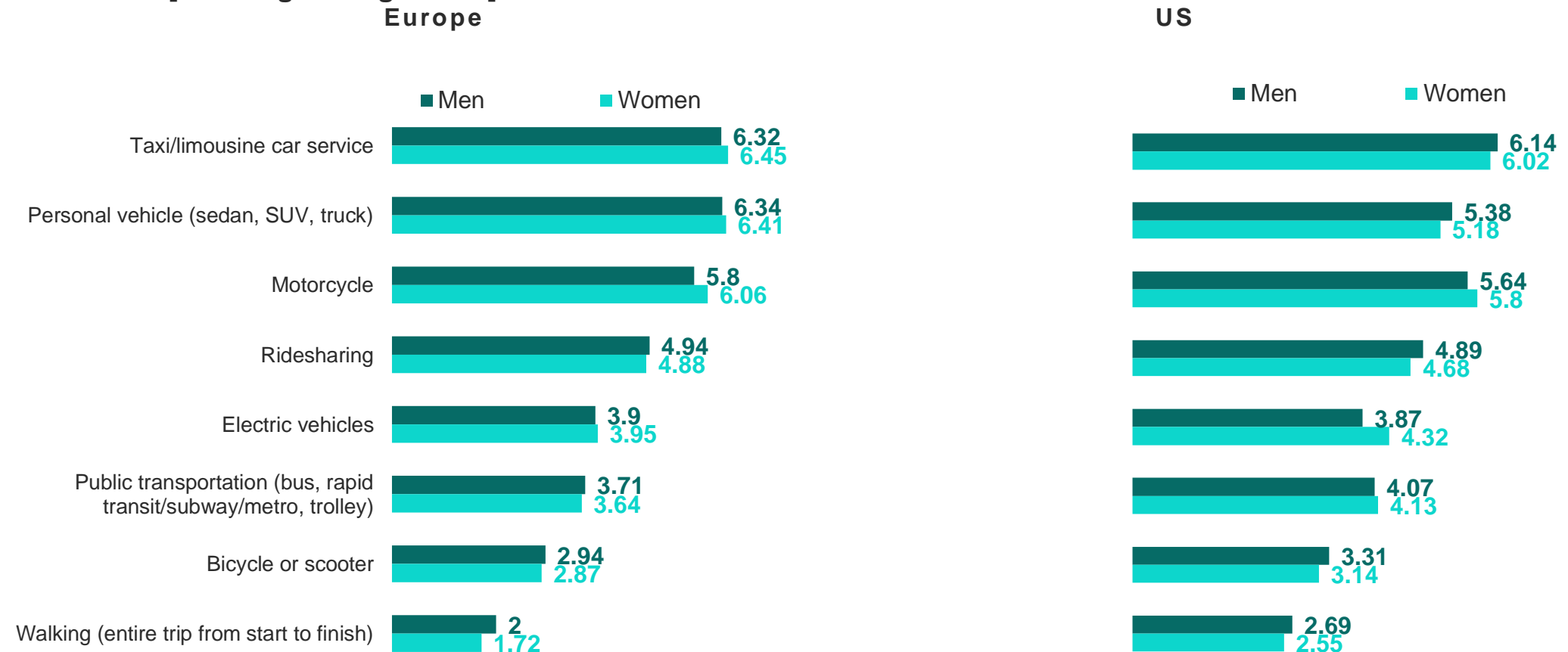
In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? Please rank in order from most sustainable at the top to least sustainable at the bottom, where 1 is most sustainable and 8 is least sustainable. **[Showing Average Rank]**



SUSTAINABLE TRANSPORTATION & CARBON FOOTPRINT OPINIONS

There are not dramatic differences in perceived sustainability of different transportation options by gender.

In general, which of the following modes of transportation do you think are most environmentally sustainable for commuting locally? Please rank in order from most sustainable at the top to least sustainable at the bottom, where 1 is most sustainable and 8 is least sustainable. **[Showing Average Rank]**





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