



E-Bikes in the United States

Results from an online survey

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What is an E-bike?

Electric bikes or e-bikes vary widely in their technology and style. This study focuses on e-bikes that are essentially standard pedal bicycles that have a battery and small motor to assist the rider with propulsion. Electric scooters with pedals are not considered e-bikes for the purposes of this project.

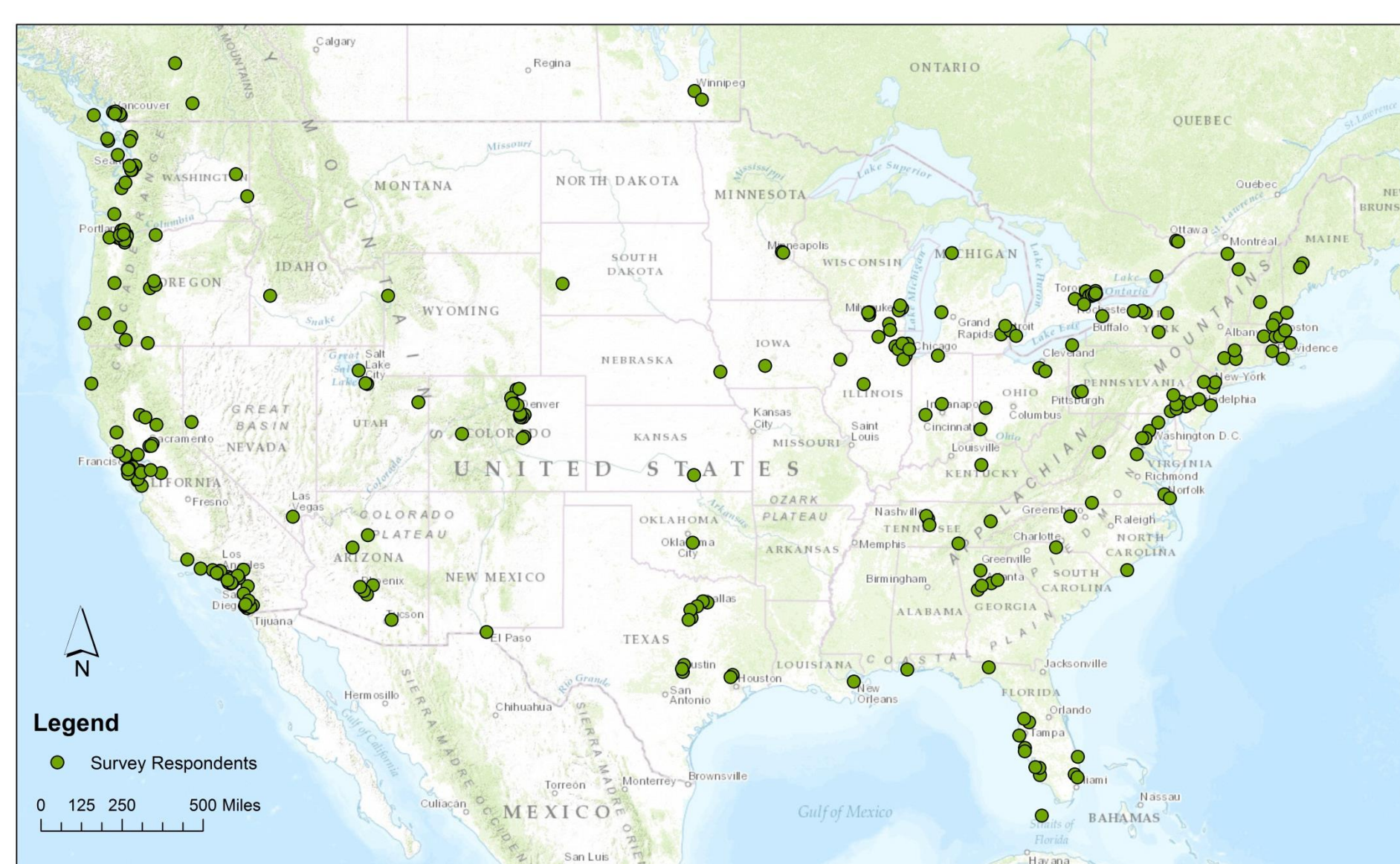
Objectives

To increase understanding of the factors influencing the purchase and use of e-bikes.

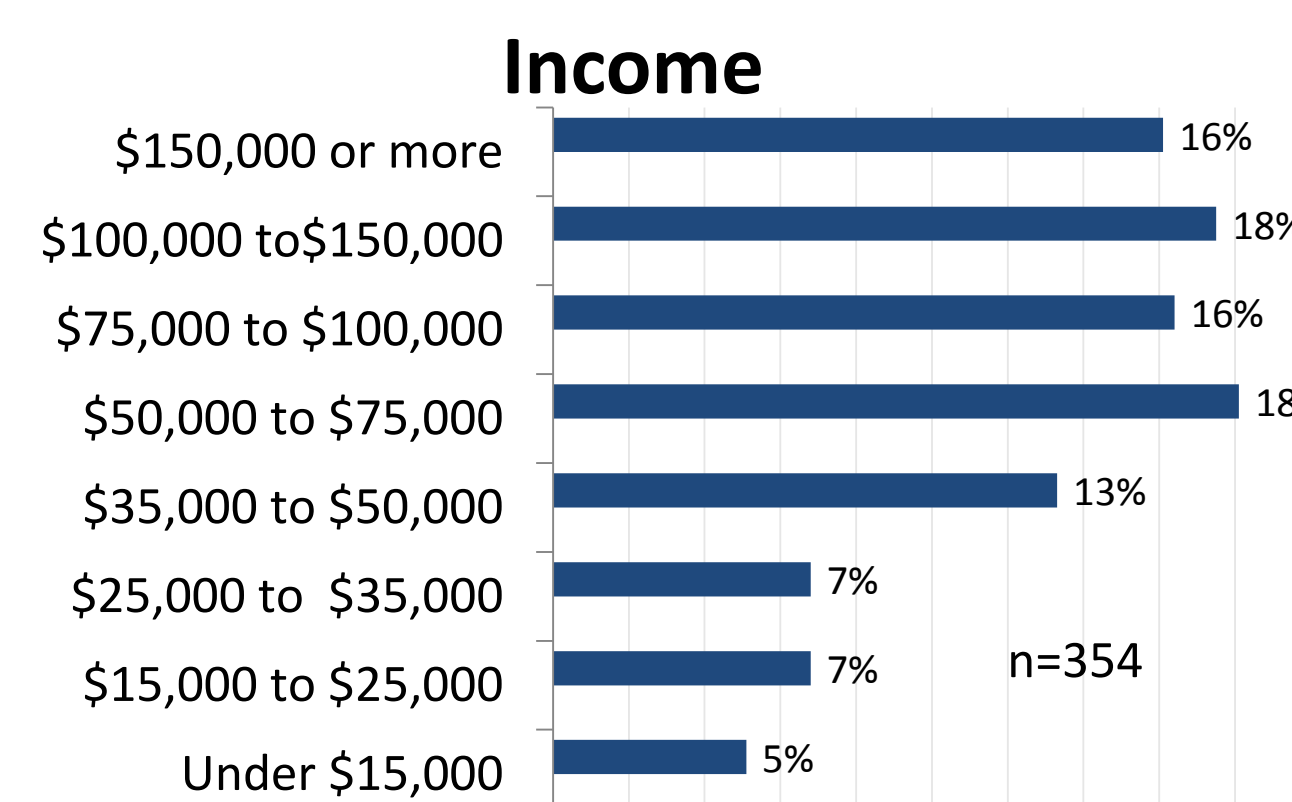
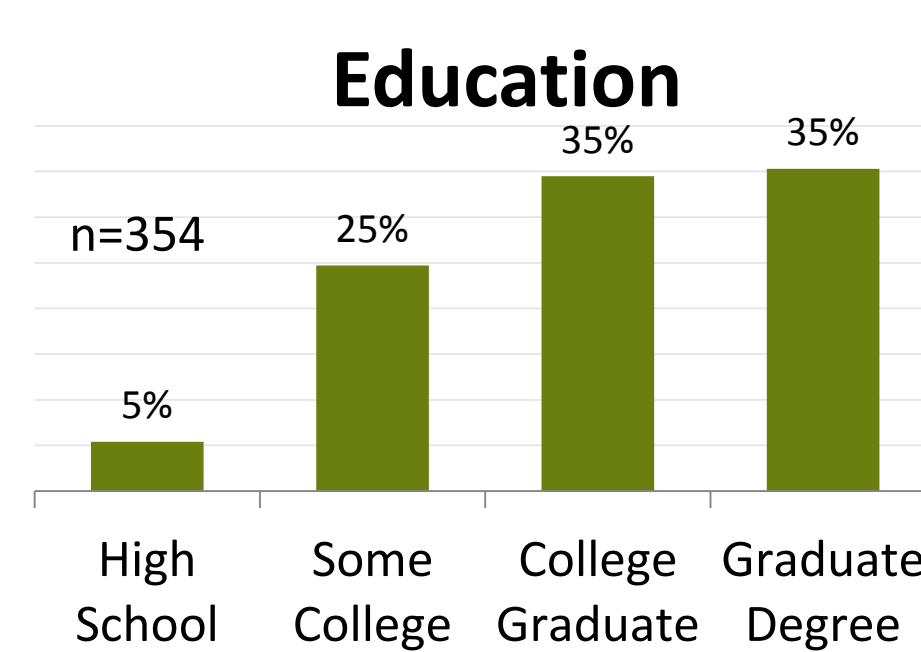
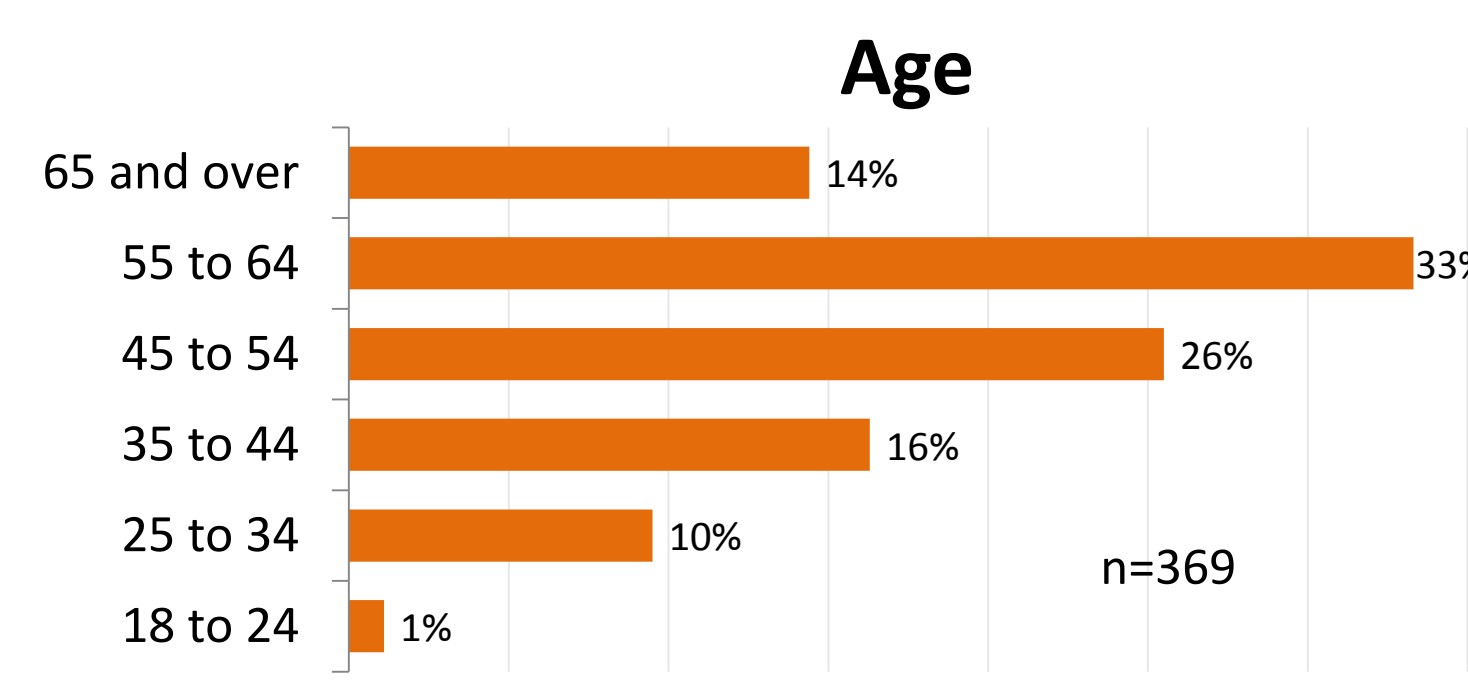
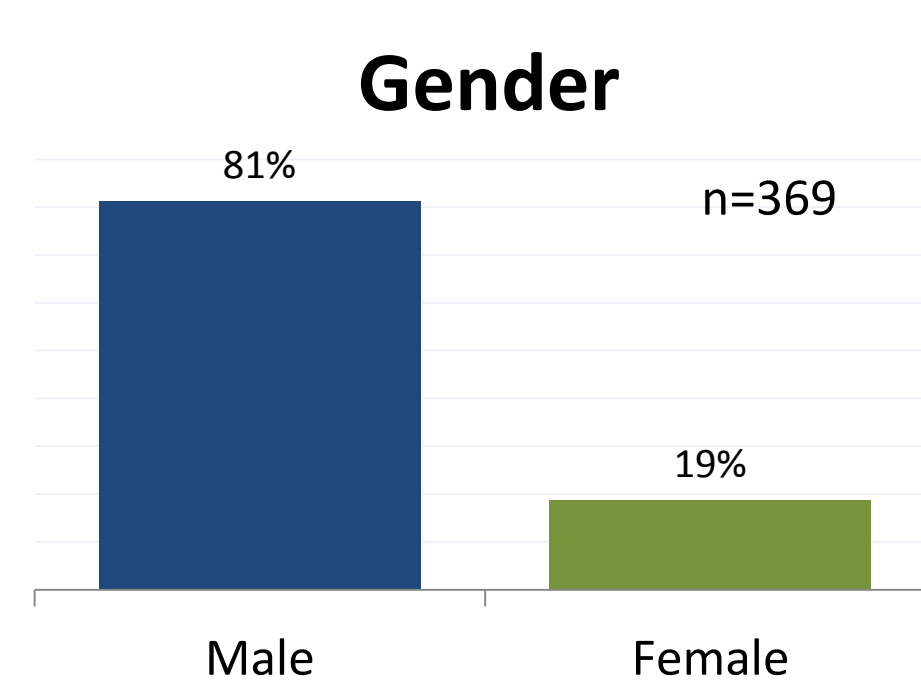
Methodology

We surveyed 446 e-bike owners, using an instrument adapted from Monash University. The survey was administered online starting March 7, 2013 and continues to be open at this time. Data for this poster shows results from 446 respondents through May 24, 2013. The survey was distributed through e-bike blogs, forums, Facebook pages, Twitter accounts, e-mails to manufacturers and retailers, and via postcards to retailers in the Portland region.

Geography of survey respondents



Demographics of respondents



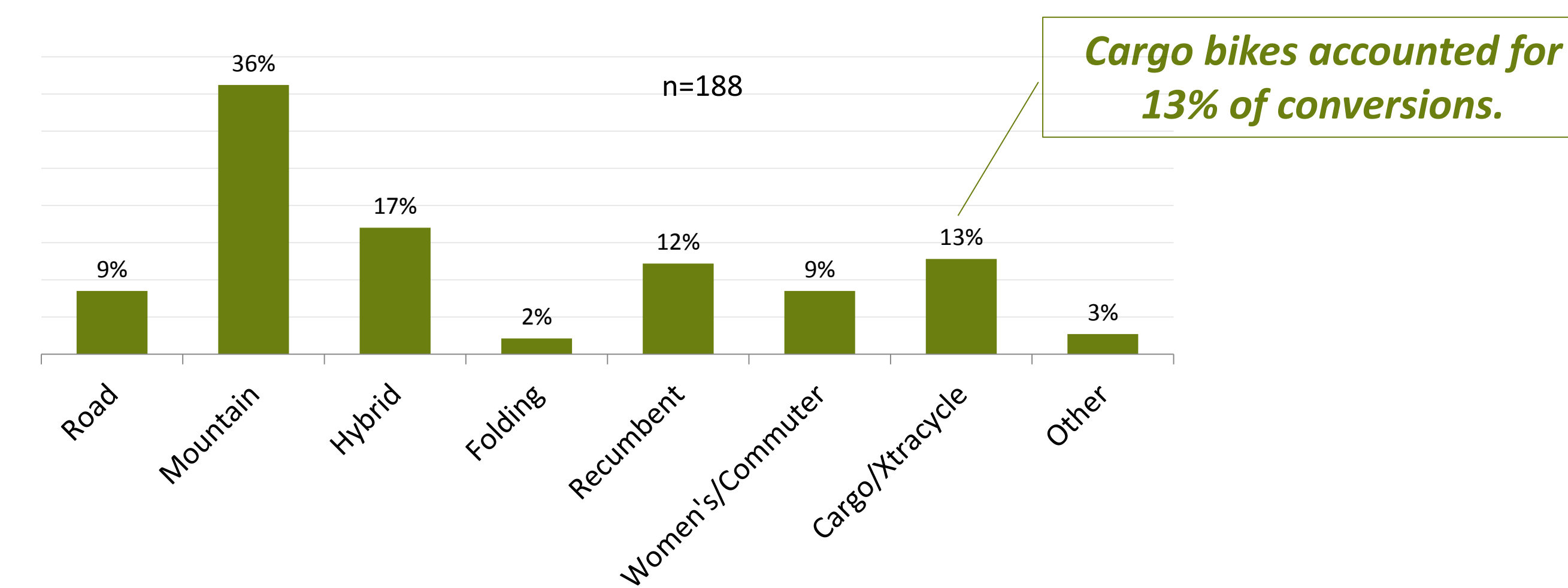
Demographic summary

- 91% white
- 89% have access to a motor vehicle
- 34% indicated that they have a condition that makes riding a standard bike difficult
- Highly educated
- Above average income
- Predominately male

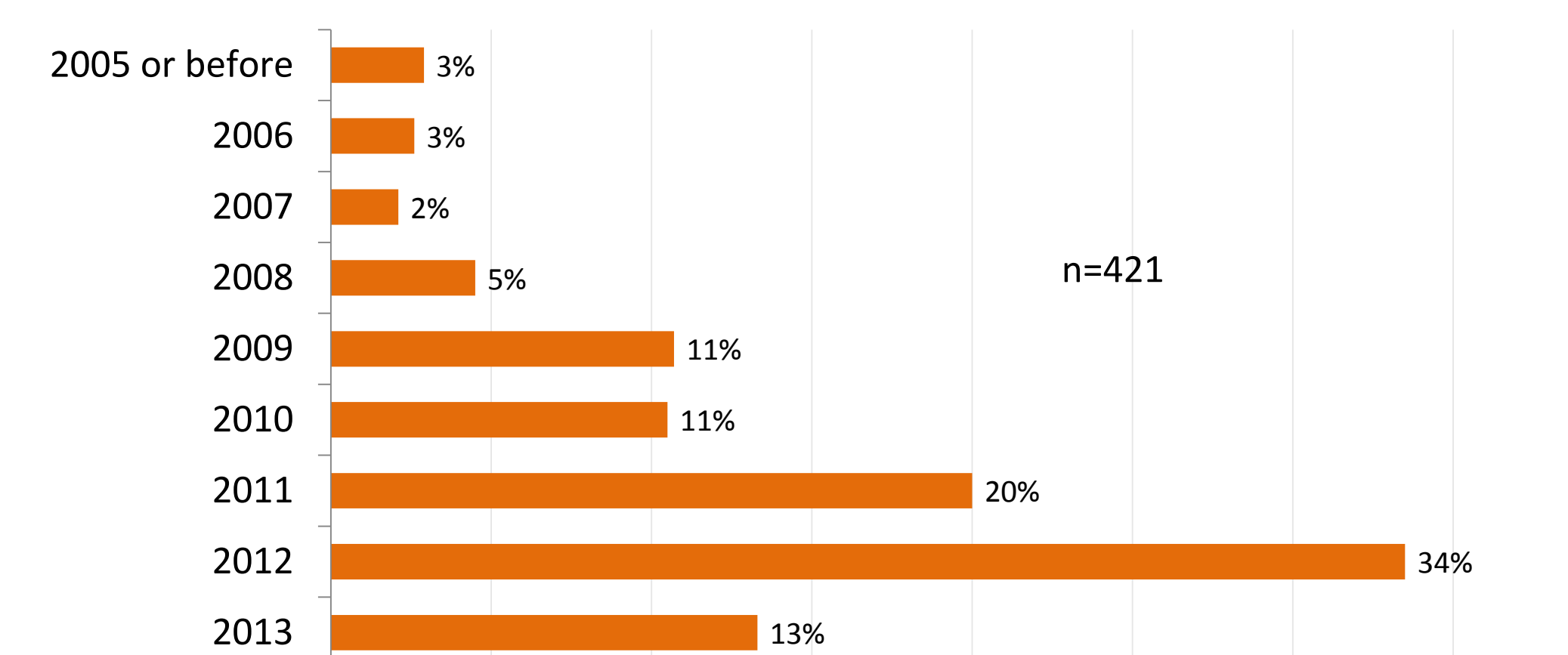
Purchase Decisions

Over half (56%) purchased an e-bike, while 44% converted a bike to electric-assist.

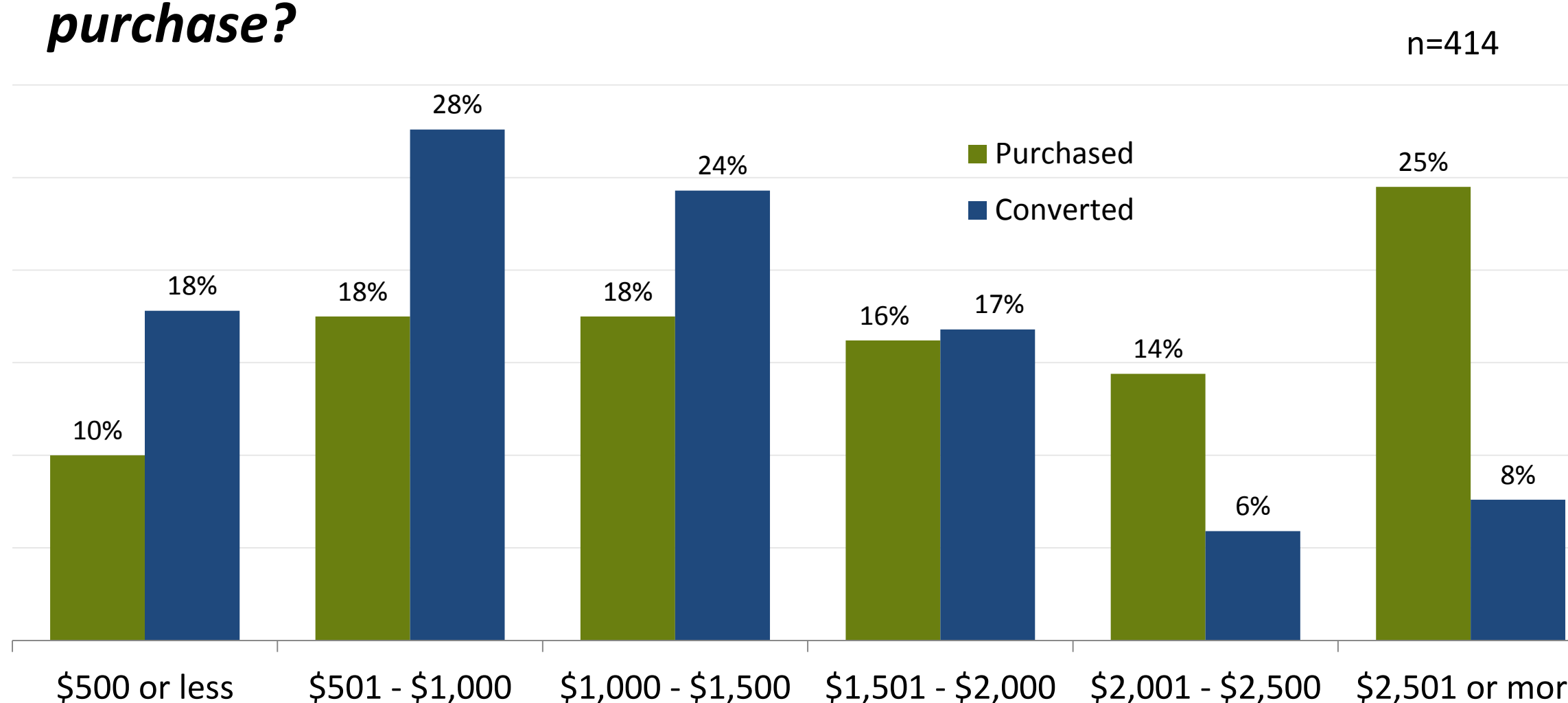
What type of bike did you convert?



In which year did you purchase your electric bike or conversion kit?



How much did your electric bike or conversion kit cost to purchase?



Motivations

What were the main reasons you bought an electric bike, or converted a standard bike (check all that apply)?

To replace some car trips	63%
To ride with less effort	53%
Health - To increase fitness	49%
Because you live or work in a hilly area	40%
Health - Medical condition reduced your ability to ride a standard bike	22%
To be able to keep up with friends/family	13%

What is the main reason that you use your electric bike (purpose of trips)?

Transportation	64%
Recreation	20%
Other*	16%

* Open-ended responses not yet coded

"To replace 95% of car trips and make commuting fun" – Survey Respondent

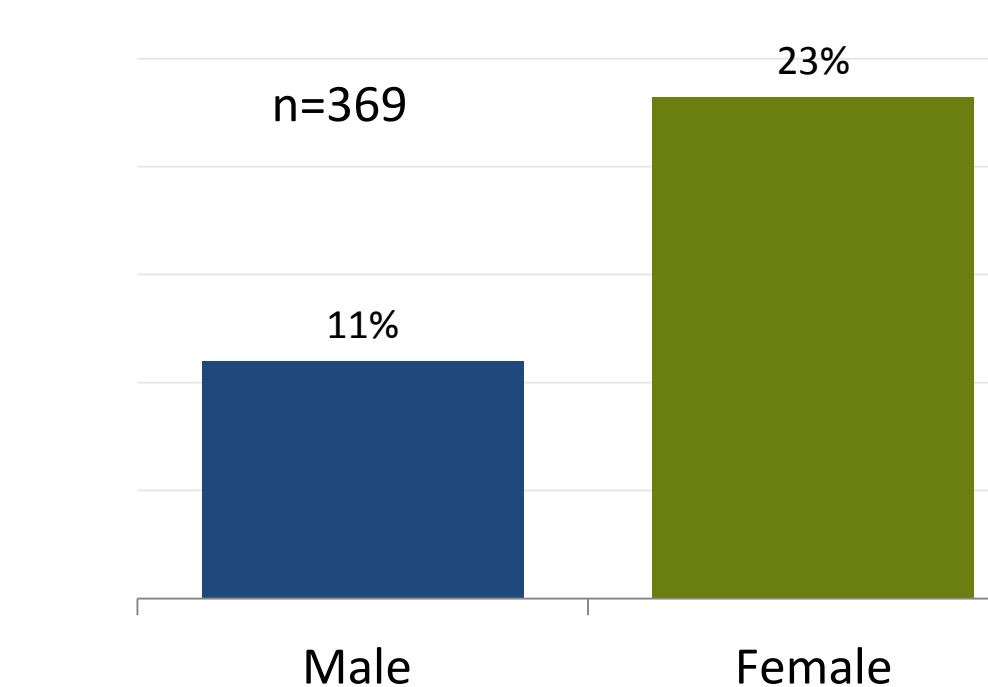
Electric Bike Use

- Over 90% (93) use their e-bikes weekly or daily
- Three quarters (75%) ride to different destinations on their e-bikes than they did on a standard bike
- Over half (52%) reported that the battery has run out while they were riding
- 66% either agreed or strongly agreed that their top speed was higher on an e-bike
- Over 80% (83) either agreed or strongly agreed that their average speed was higher on an e-bike

Differences between men and women

- 52% of women responded that they take a different route on their electric bike than they did on their standard bike as compared to 42 percent of men.
- 82% of women responded that they ride to different destinations on their electric bike than they did on their standard bike compared to 73 percent of men.

What were the main reasons you bought an electric bike - to be able to keep up with family/friends when I go for rides.

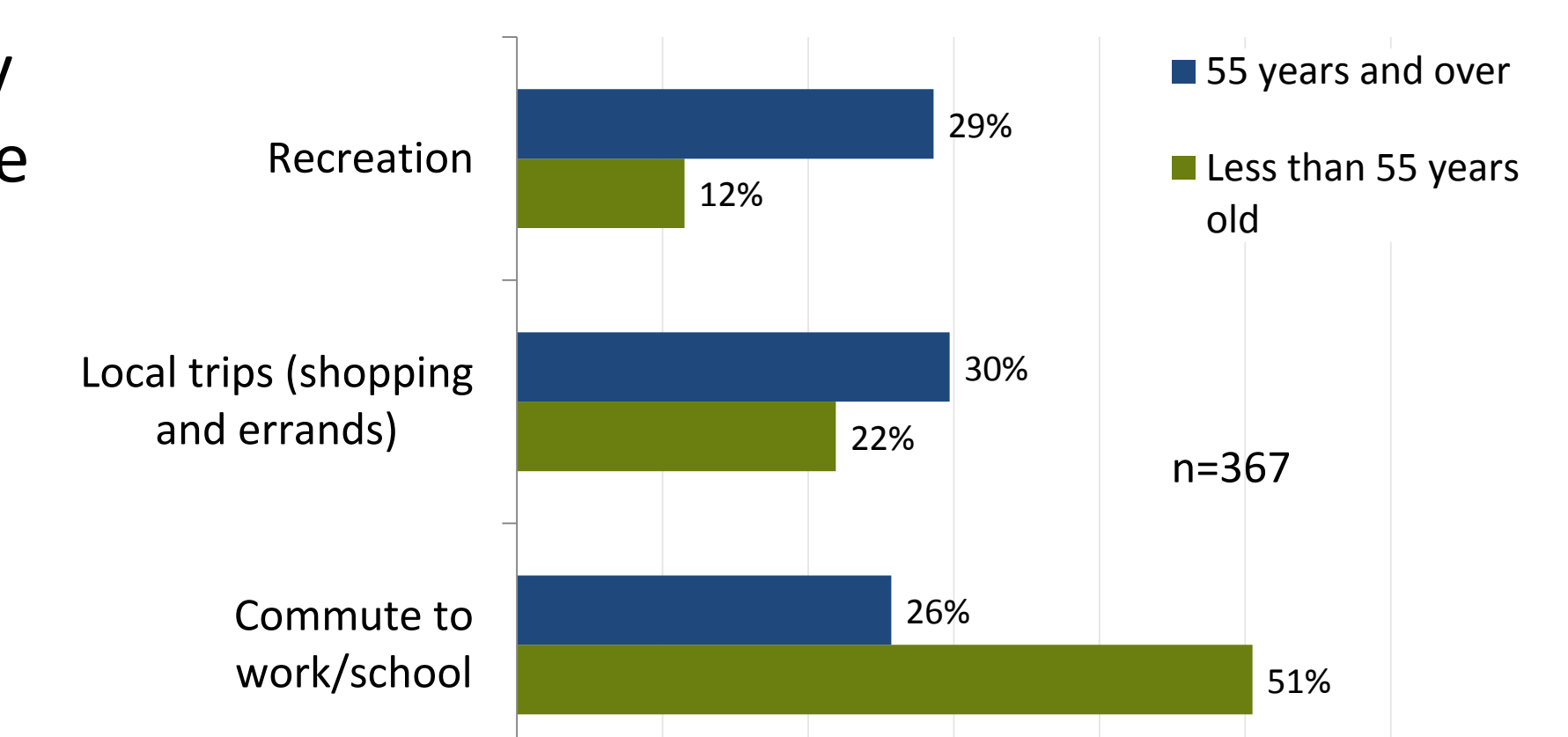


"To encourage me to ride longer distances and be able to keep up with family & friends who were more fit" – Survey Respondent

Differences between older and younger adults

- 59% of respondents 55 years of age and older indicated that one of the main reasons they bought an electric bike was to ride with less effort compared to 50% of those under 55.

What were the main reason that you use your electric bike?



"I have bad knees (I'm retired, 68 years old). If I pedal a bike my range is limited by pain to about 5 to 6 miles. The e-bikes has a range per charge of 30 to 35 miles." – Survey Respondent

Conclusions and next steps

The survey remains open and data collection continues. There are a number of open-ended survey questions that will be coded and categorized to get additional information and richer descriptions. As this survey was adapted from Monash University in Australia, a comparison between the two countries is one of the next steps. We would like to thank Geoff Rose from Monash University for allowing us to use their survey instrument.