Advancing Urban Transportation: Assessing Micromobility Potential in Kamloops

Rufaro N. A. Mundangepfupfu

Thompson Rivers University

Dr. Zubair Raja

September 30, 2024

Abstract

Micromobility represents a transformative solution for urban transportation, enhancing connectivity and sustainability. This study investigates the potential of micromobility integrations in advancing urban sustainability goals in British Columbian communities. With supportive provincial and municipal regulations outlining operational guidelines, and incentive programs from local employers promoting micromobility adoption, the feasibility of micromobility in Kamloops, BC is examined and aligned with local sustainability goals. By examining infrastructure, geographic, demographic, regulatory, and incentive factors, current infrastructure gaps and safety concerns are identified, with a need for expanded active transportation networks. The city's diverse topography and dispersed key locations present unique challenges, though the demographic profile is favorable for micromobility adoption. Despite safety and regulatory challenges, micromobility can significantly contribute to environmental sustainability, social equity, and economic development. The potential to enhance public transit accessibility and reduce car dependency aligns with provincial sustainability goals. Community engagement and addressing research gaps in local contexts are crucial for optimizing micromobility solutions, fostering a more pedestrian-friendly and connected urban environment. This paper underscores the need for continued research and pilot projects to fully realize the benefits of micromobility in British Columbia.

Contents

1. Introduction

As defined by Olabi et. al., micromobility refers to compact, lightweight vehicles typically with speeds less that 30 Km/h operated personally by a single road user i.e., skateboards, scooters, bicycles, e-scooters, and e-bicycles (2023). The term is most commonly used to refer to shared-mobility systems that incorporate e-bicycles and e-scooters in their fleet. Following the introduction of Lime's shared mobility service in the United States in 2017, the popularity of micromobility saw a sharp rise across the world with thriving markets in Asia and Europe, and a rapidly growing market in North America. The number e-scooter users in Canada alone are expected to increase about 50% by 2028 from its current level (1,715,000) (Statista, 2024). The peak in interest has prompted several Asian and European studies uncovering massive potential sustainability benefits for cities. Geared towards shorter trips, the nature of micromobility vehicles makes them a suitable and convenient solution for first- and last-mile journeys. Also, being a low-emission travel modality, micromobility can stand to advance the progress of cities working towards the United Nations Sustainable Development Goals (SDGs) (Olabi et al., 2023). This report takes a look at the state of micromobility in the city of Kamloops and the province of British Columbia on a broader scale. The research was constrained to British Columbian data and pulled from municipal and provincial planning documents, micromobility regulations, pilot project case studies and limited existing research.

2. Literature Review

2.1. Global Perspective on Micromobility

Micromobility is fast growing emerging technology which has potential to be a key factor for cities working to achieve sustainable transport options. Studies from Italy, Germany, United States, and Switzerland, all highlight the convenience of e-mobility in solving the first-last mile problem (Reck et al., 2021, 2022; Aba & Esztergár-Kiss, 2023; Olabi et al., 2023; Chicco & Diana, 2022; Zhang & Song, 2022).

Olabi et al.'s review on micromobility highlights the findings of studies on the impact of micromobility solutions on the Sustainable Development Goals (SDGs), showcasing the potential to advance at least 7 of the 17 goals. These SDGs target three dimensions of sustainable development—social, economic, and environmental—and micromobility holds the promise to address all these dimensions effectively (Olabi et al., 2023).

By reducing dependency on private car use, micromobility contributes significantly to environmental sustainability through the reduction of harmful emissions in individual travel routines. Additionally, affordable and accessible travel modalities offer economic mobility options, connecting individuals to public transportation and other sustainable alternatives. Furthermore, designing urban spaces with micromobility in mind helps cities become more integrated and resilient. The increased accessibility fosters a pedestrian-friendly environment that promotes overall mobility and connectivity.

Enabling a mode shift from automobiles while complementing and encouraging transit use and walking advances goal 13: Climate Action, and goal 15: Life On Land, through the reduction of greenhouse gasses (GHGs) in the atmosphere. Additionally, it promotes Goal 1: No Poverty, Goal 5: Gender Equality, and Goal 12: Responsible Consumption and Production when coupled with equity and affordability programs implemented under sustainable business models. Micromobility also supports Goal 3: Good Health and Well-being by encouraging physical activity and reducing air pollution, which has direct health benefits. Furthermore, it aids in achieving Goal 11: Sustainable Cities and Communities by creating more livable urban spaces and improving overall quality of life. By integrating these solutions, cities can create a more sustainable, resilient, and accessible future (in transportation) (Olabi et al., 2023).

Attributable to the novelty of the technology, doubts remain on an overly optimistic view of Mobility-As-A-Service (MaaS) systems. In car centric societies like the western world, private vehicle owners may be resistant to changing their mobility habits. This reluctance to change, coupled with the potential for MaaS to replace public transport trips, could lead to increased vehicle crowding on public roads and unsustainable commuting. This additional traffic could occur as walking and cycling trips are replaced by MaaS solutions. At present, MaaS solutions are underdeveloped, and much is still to be uncovered regarding its social implications. Studies have found a determinant of the development of MaaS to be a growing and diverse offer of shared mobility coupled with a strong public transit system (Reck et al., 2022). Researchers agree that micromobility and MaaS will significantly change mobility patterns, however deeper analysis is required to establish the nature of this change. (Medina-Molina & Rey-Moreno, 2023)

2.2. Micromobility in Canada

The Canadian micromobility landscape is largely experimental in nature and limited in its spread across the country. Frisbee et. al.'s (2022) examination of policy approaches looked at 26 municipalities across the 10 provinces of Canada. 50% of these municipalities have no specific policy approaches for integrating and supporting micromobility. In the municipalities supporting micromobility adoption, 53% of the support is only partial or emerging. Canadian policies on micromobility take separate approaches for motor-assisted cycles (e-bikes) and electric kick scooters (e-scooters). Where use is permitted by local government regulations, motor-assisted cycles are generally given an extension of the rights and regulations for regular self-powered cycles with restrictions placed on use on certain public paths. Historical transportation planning has primarily focused on catering to motor vehicles, a trend supported by Frisbee et al.'s review indicating that over 70% of people commute by driving (2022). Given the infancy of micromobility, planning for electric kick scooters remains in the developmental stages. In

Canada, owing to a lack of regulations, e-scooter use is illegal outside municipalities participating in provincial pilot programs. General regulatory guidelines exist at federal and provincial levels, but individual municipalities must adopt these regulations, allowing for local context adjustments, to incorporate electric kick scooters into their transportation systems. From municipal transportation planning documents, Alberta, British Columbia, and Ontario have supportive meaningful policy approaches to electric micromobility. In Quebec, e-scooters are banned in Montreal and Quebec City while support for motor assisted cycles remains with municipal bike share programs. Including Quebec, all other provinces do not have established approaches to electric micromobility (Frisbee et al., 2022).

Motor-assisted cycles are commonly classified as follows:

- **Maximum output**: 500W
- **Pedals**: Must be operational and capable of powering the vehicle without motor assistance
- **Handlebars**: Required
- **Weight limit**: 120 kg
- **Maximum speed**: 32 km/h
- **Protective headwear**: Required
- **Minimum age restriction**: Ranges from 14-18 years depending on the province.

Similarly, e-scooters generally must adhere to these classifications:

- **Maximum output**: 500W
- **Weight limit**: 45 kg
- **Maximum speed**: 24 km/h
- **Protective headwear**: Required
- **Handlebar for steering**: Required (and no seating surface on device)

(Green Health Care, 2024)

Frisbee et al.'s (2022) review notes policy differentiation by type of micromobility vehicle across all of Canada. There is broad acceptance of motor-assisted cycles in the transport system with limitations placed on speed, power, and weight, and the same right of way given to regular bicycles. Conversely, e-scooters have faced considerable regulatory pressures in their entrance to the Canadian market. The emergent policy learning in British Columbia and Ontario takes an iterative form, allowing a limited scale of e-scooters with broader policy acceptance only occurring after further study. The approach in Alberta is similar to that of a free market where there is no overarching provincial framework and municipalities are free to take their own path to adopt micromobility. This has resulted in the establishment of the country's first commercially viable MaaS networks in their two largest municipalities, Calgary and Edmonton. The province of British Columbia provides direct support for municipalities to initiate local pilots of e-scooters, clearly showing their interest in micromobility as a sustainable transport option. In Ontario, a provincial regulatory framework is established for local municipalities to experiment with the adoption of e-scooters in their transportation network (Frisbee et al.).

2.3. Specific Studies in British Columbia

As with studies on the Canadian micromobility context, data on British Columbia was limited. Most Canadian micromobility research stems from municipalities exploring its integration into their transportation systems, along with minor references in active transportation studies and recommendations based of micromobility literature reviews. Our study reviewed two such papers from British Columbian Universities that conducted scoping literature reviews.
Historically, the BC Motor Vehicle Act (MVA) did not permit electronic personal transportation devices on public roads or sidewalks. However, the E-Kick Scooter Pilot Project, initiated with amendments to the MVA in 2021, allowed constituents in 13 communities to legally ride e-scooters on specified municipal streets and paved pathways. This project has been extended for another four years starting April 5, 2024. Communities involved include Coquitlam, Cranbrook, Kelowna, Nanaimo, North Vancouver (city and district), Richmond, Vancouver, Vernon, West Vancouver, Oliver, Osoyoos, and Langley Township. The participating communities have the authority to regulate e-scooter usage, including where and how these devices can operate (Government of British Columbia, 2024). For example, in Richmond, e-scooters can travel at 20 km/h on roadways and 15 km/h on shared paved pathways, whereas in Vernon, e-scooters are permitted on sidewalks. In contrast, Vancouver restricts e-scooters to streets with and without cycling facilities and shared multi-use pathways. Safety evaluations are ongoing, led by the Ministry of Transportation and Infrastructure, ICBC, and the BC Injury Research and Prevention Unit. Initial findings from the pilot project indicate substantial usage and general public support despite some safety concerns. In Vernon, users traveled over 470,000 kilometers, with 50% using the e-scooters for commuting. Surveys highlight the need for more data to assess injuries, public education, and better enforcement of regulations. For example, in Kelowna, data from Interior Health between April 2021 and September 2022 identified 108 injuries from 453,000 trips, with a significant reduction in injury rates after the initial two months. In line with provincial goals, the Capital Regional District (CRD) emphasizes promoting active travel to meet climate action targets, with e-scooters and e-bikes providing carbon-efficient transportation alternatives. In 2022, e-bikes accounted for 30% of all bike trips in the CRD. From 2017 to 2022, active travel modes, including walking and bicycling, increased by 7% throughout the region. (CRD TSC, 2024).

The study by Travers et al. (2022) highlights the lack of the British Columbian context of micromobility as they conducted a review of global literature and used their findings to provide recommendations on the adoption of micromobility in general. To reach effective adoption and integration of micromobility options in urban transportation systems numerous policy recommendations are made. Improving bicycle infrastructure, providing parking and secure lockup facilities near public transport, and allowing e-mobility devices on transit can enhance adoption. Collaboration between government and private operators should prioritize equity and sustainability, expanding access for low-income and racialized communities. Policies must ensure accessibility for users with disabilities and offer economic incentives like tax rebates and cost spreading to encourage adoption. Enhancing the built environment, addressing privacy concerns, and focusing on community goals over media sensationalism are also crucial. Clear differentiation between types of e-mobility devices is needed for consistent regulation (Travers et al., 2022). Travers et al. believe these measures will promote sustainable and equitable access to micro-mobility solutions.

3. Preliminary Feasibility Analysis

As the popularity of micromobility continues to increase, more cities have taken an interest in exploring micromobility options for their communities. This study conducted a minor inquiry into the feasibility of a micromobility program in the city of Kamloops using publicly available map data, local planning documents, and data from local studies relating to active transportation.

3.1. Infrastructure Assessment

The importance of supporting infrastructure is stressed throughout micromobility literature. The common issue within the biking and active transportation sector in Kamloops is the lack of said infrastructure. As part of ongoing development of an Active Transportation Plan for Kamloops, the city released a mapping tool to identify gaps in the current active transportation network. With a total of 659 respondents, the majority of gaps were missing links between bike routes/lack of a bike route, and safety concerns on present infrastructure. Some areas with concentrated concern areas are the university district (Thompson Rivers University), the downtown area and stretches of some highways i.e., Westsyde Road and Valleyview Drive (See *Figure 2.*). A study by a local high school's environmental club found a perceived lack of safety among students and staff around cycling and public transit use when going to school. Due to such safety concerns and disconnected cycle paths, only 28% of the respondents indicated that they would cycle to school if there was improved infrastructure at school such as secure storage (Bell D., personal communication, April 4, 2024). The combination of bicycle and pedestrian network gaps, along with safety issues, suggests that the overall connectivity of the active transportation network is fragmented. Such fragmentation only makes it difficult for residents to rely on active transportation modalities in daily commutes and errands. There remains room for improvement for the entire network, as highlighted in the Transportation Master Plan (TMP) current infrastructure for active transportation makes up 26% of the whole transportation network, and the goal is to increase it to 33% by 2039. The city's transportation master plan outlines a robust network of bike lanes, multi-use paths, and pedestrian-friendly streets (TMP, 2018). Such planning initiatives show the city's willingness to move toward an integrated active transportation network. This expansion is essential for supporting the integration of micromobility options into the broader transportation system.

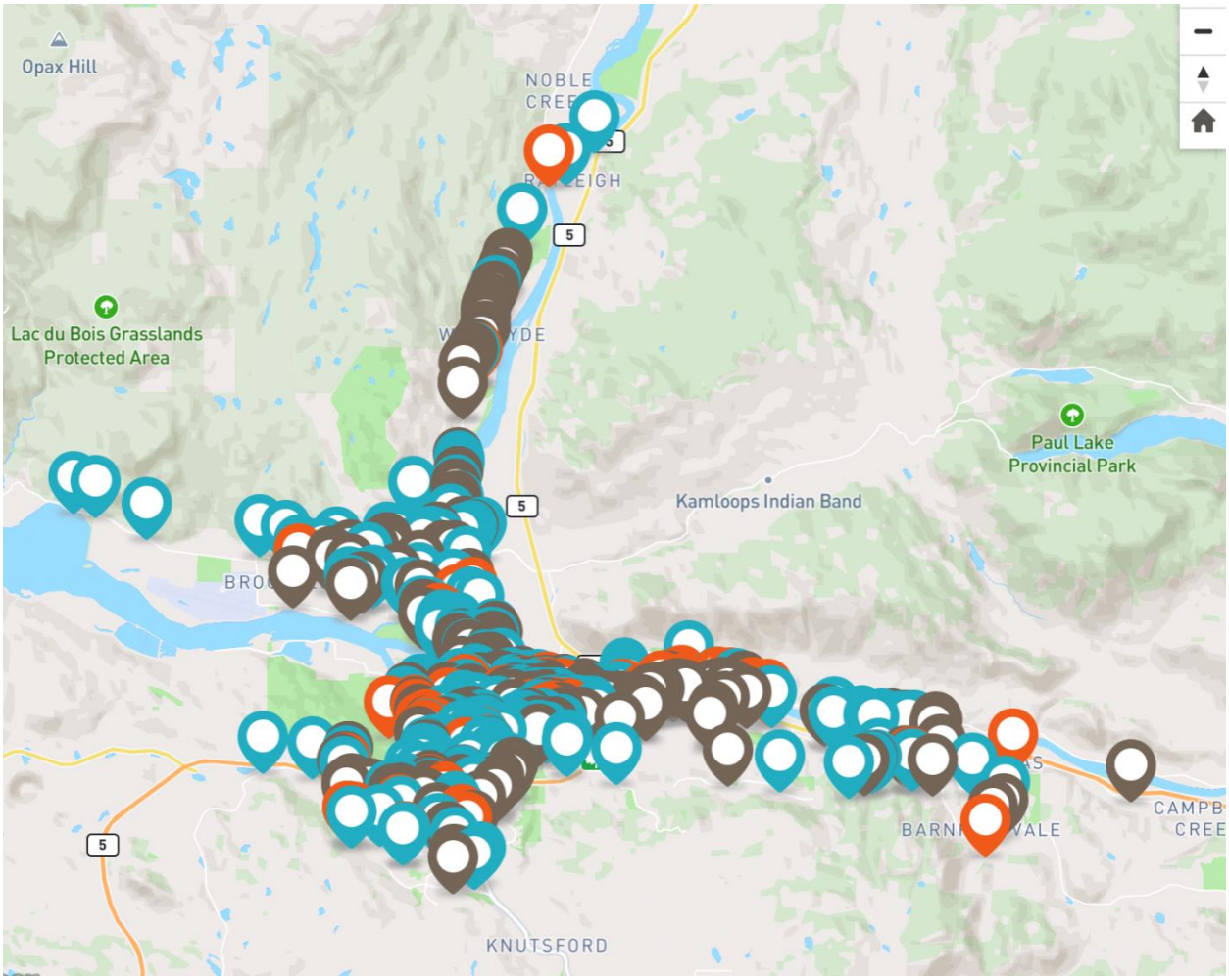


Figure 1. Active Transportation Gap Survey Tool (2023) [Digital image]. https://letstalk.kamloops.ca/atplan

3.2. Geographic and Demographic Considerations

The City of Kamloops spans a substantial geographic area characterized by its diverse topography and well defined urban and rural areas. The size and varying elevations present unique challenges for micromobility options. The urban core, particularly downtown Kamloops and the North Shore, is more densely populated and features a grid-like street network, making it conducive to micromobility options due to higher pedestrian traffic and commercial center accessibility. Active travel within the city is challenged by the dispersed nature of key location such as commercial and entertainment centers (Matonovich J, personal communication, April 25, 2024). For example, the location of the Aberdeen Mall in the southwest of the city on a hill, leaves the majority of citizens reliant on auto travel to traverse the city. The addition of micromobility options would help reduce the reliance on motor vehicles and increase the range covered by active travel users by providing assistance on steeper routes. For less densely populated areas of the city like the southeast and southwest, micromobility hubs may require strategic placement to ensure effective cover and accessibility.

As of 2022 the city had a population of 97,902. A look at the demographics show that the city's age distribution is balanced with a significant portion being working age adults (56,805) (Statistics Canada, 2023). This demographic profile is ideal for the introduction of micromobility as younger and middle-aged adults are typically more inclined to adopt new transportation technologies (Reck et al., 2022).

A commitment to sustainable transportation is evident in the city's targets to increase the share of sustainable modes of commuting to 30% by 2039 and to achieve an annual transit ridership of 8 million by the same year (TMP, 2018). These goals highlight the potential union between public transit and micromobility, where e-scooters and e-bikes can serve as first-mile/last-mile solutions, enhancing overall connectivity and reducing reliance on personal vehicles (Reck et al., 2022).

Kamloops is also focused on reducing GHG emissions, with a target to significantly lower municipal GHG emissions by 2039. The electric and low-emission nature of micromobility solutions, align well with this environmental strategy. By providing a sustainable alternative to short car trips, micromobility can contribute to the city's environmental goals and improve air quality (Reck et al., 2022).

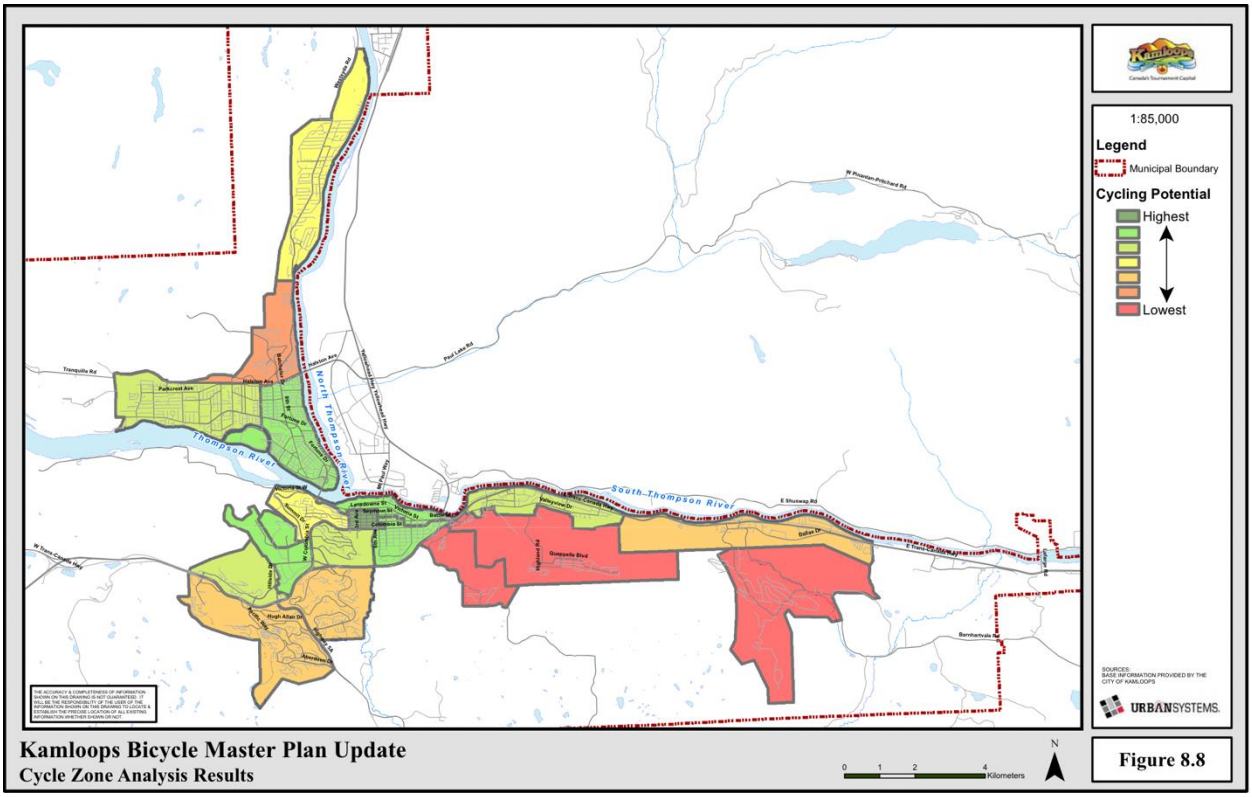


Figure 2. City of Kamloops – Map of city cycling potential (2010) [Digital Image]. https://www.kamloops.ca/sites/default/files/docs/city-hall/10-05-31-bmp.pdf

3.3. Regulatory Environment.

Micromobility is subjected to a range of provincial and municipal regulations governing its use and integration into the urban transportation system. The regulations for e-bikes and e-scooters are separate at the provincial and municipal levels. Operation of an e-bike on a highway is permitted subject to prohibitions and specification requirements. These prohibitions and requirements are further separated by two classifications in the MVA, light and standard e-bikes. Light e-bikes are defined as those that 1) require pedalling/hand-cranking to be in motion before providing motor assistance, 2) have a maximum continuous power output rating of 250W, and 3) have a maximum speed of 25 Km/h. Also, these vehicles may not be equipped with an accelerator controller if they are to be classified as a light e-bike. The standard e-bike follows the common classification defined previously and account for vehicles equipped with an accelerator controller. Such vehicles are required to have a device separate from the accelerator controller to either control the power state of the motors or to prevent them from engaging before the user reaches a speed of 3 Km/h. The requirements and prohibitions for light and standard e-bikes are largely similar with differences in the age prohibitions. Light e-bikes are permissible for use by users 14 years old or older, and standard e-bikes for users 16 years old or older. The vehicles are required to also meet specifications for their braking systems, driving system, energy storage devices, and electrical terminals. E-bikes are permitted to be operated on highways given that they fall in line with the requirements and prohibitions, and the user is of legal age (Motor Vehicle Amendment Act, 2023).

Prior to April 5th, 2024, e-scooters in Kamloops were regulated under the In-Line Skates, Skateboards and Scooters By-law. This by-law largely restricted the areas of use for these vehicles not permitting use on high traffic routes and in the downtown core (City of Kamloops, 2010). With the renewed E-Kick Scooter Pilot Project, provincial level regulations on the permissible use of e-scooters were introduced. Operation of these devices must still be within participating communities. With a few exceptions, the regulations define 'pilot project highways' as any highway or portion of highway in the province. This broad definition allows for there to be cases where e-scooter operation can be permitted outside participating communities allowing them to be used on highways, paths, and crosswalks provided there is a traffic control device permitting the use of e-scooters (Motor Vehicle Amendment Act, 2023).

The city of Kamloops has been working towards the prioritization of e-mobility and active transportation through creation of initiatives and development of planning documents. Currently, the city is working on developing an Active Transportation Plan that builds on previously identified transportation priorities from older city plans and public engagement sessions (City of Kamloops, 2024). Current planning documents are outdated and provide little information on the present state of active transportation in the city. The Bike Master Plan was last updated in 2010 and the TMP in 2018 (BMP, 2010; TMP, 2018). The bike and active transportation maps publicly available online have yet to be updated with recent and ongoing project, and with the national drive towards facilitating active transportation a new plan was needed. The Electric Vehicle and Electric Bike Strategy from 2020, outlines goals for the integration of e-bikes into the city transportation system. These goals include having ¾ of the Kamloops population reporting safe travel environments to common locations by 2025, and

40% of the population using sustainable modes to commute to work (increasing from a goal of 30% in the TMP) by 2040. As part of this plan, the city aims to expedite cycling infrastructure development, account for private vehicle security, and explore e-bike share programs and e-bike incentives (City of Kamloops, 2020). Attitudes around e-scooters are largely positive within the city's planning divisions with the Kamloops Sustainability Office leading efforts to add the city to the provincial pilot program (Cheetham G., personal communication, March 1, 2024). Among the people, gradual adoption is starting to actualize, slowly seeing more individuals investing in personal e-mobility devices and taking to the streets. The city aims to create an integrated sustainable transportation system, allowing for safe walking, bicycling, and transit use on connected travel networks that provide the most efficient routes (TMP, 2018). By aligning these efforts with provincial regulations and leveraging city-specific policies, Kamloops is positioning itself to effectively integrate micromobility into its transportation ecosystem. This strategic approach not only supports environmental sustainability but also enhances urban mobility and connectivity.

3.4. Incentives and Barriers

Active transportation advocacy groups like the Kamloops Cycling Coalition (KCC) have been instrumental in pushing for improvements that cater to micromobility users in Kamloops. The KCC organizes and participates in events for the cycling community, engages with the public, collaborates with other organizations, and serves on advisory planning committees. They also connect with provincial organizations such as the BC Cycling Coalition and participate in initiatives like GoByBike Week to gather best practices and influence local policy decisions. The work they do leads to the development of key infrastructure or programs.

One significant recent development celebrated by the KCC is the establishment of a bike valet service in downtown Kamloops. This service, which provides secure bike storage, is currently available near the location of the Farmer's Market which runs twice a week. Plans are underway to expand this service, potentially running six days a week during the summer months and funded by the Climate Action Fund Reserve (Kamloops Cycling Coalition, personal communication, April, 2024). This expansion aims to alleviate bike theft concerns, a major barrier to cycling uptake, by offering reliable and secure parking options for more cyclists across the city. For such a service to effectively work as an incentive, the number of locations offered, and awareness of the program must be increased in central locations in the city.

As previously explained, the city's infrastructure is lacking in its support for micromobility, and as such, the feasibility of e-mobility integration is heavily reliant on the development and implementation of the Active Transportation Plan. Federal support for this integration lies in commitments to promoting zero emission vehicles (ZEVs), cleaner fuels, and investing in infrastructure development. Similarly, actions like British Columbia's adoption of the Zero Emissions Vehicles (ZEV) Act, which requires 100% of new light-duty vehicle sales and leases to be zero emissions by 2040, show the support of e-mobility on a provincial level. With the aid of such clear targets and access to infrastructure grants, the city can work towards addressing many of the road safety and parking concerns through the development of dedicated

cycling/active transportation infrastructure and the creation of secure e-mobility storage locations. (City of Kamloops, 2020)

Helping create equitable access to the purchase of these vehicles, two of the lead employers, the City of Kamloops (CoK) and Thompson Rivers University (TRU), have implemented incentive programs to encourage e-mobility adoption among their staff and community. Under a program named Go Electric, CoK provides rebates on EV related development expenses. TRU is running a micromobility demo for staff and students, allowing them to test an e-bike and an e-scooter. Along with the demo, TRU also runs a rebate program for staff to purchase a micromobility vehicle and provides them with financing options for up to 24 months (City of Kamloops, 2024; Thompson Rivers University, 2023). Promoting sustainable transportation options on campus and in the community, these programs aim to demonstrate the feasibility and benefits of micromobility solutions, encouraging broader adoption across the community.

The geographic and demographic landscape of Kamloops is conducive to the implementation of micromobility solutions. With a supportive infrastructure, a population open to sustainable transportation options, and a clear environmental mandate, the city is well-positioned to integrate e-mobility into its transportation network. These solutions can enhance urban mobility, reduce traffic congestion, and contribute to the city's sustainability targets. By addressing existing barriers and leveraging active transportation advocacy, Kamloops can create a more bike-friendly environment and encourage greater use of micromobility options.

3.5. Kamloops Perception Survey

Data was collected for two weeks on a survey was conducted to guage public perceptions, preferences and concerns regarding micromobility in Kamloops, BC. The survey's aim was to identify barriers to adoption, infrastructure needs, and the community's general attitude towards micromobility as a transportation option. Respondents were asked about their current transportation habits, familiarity with micromobility, and willingness to adopt these options. Additionally, questions centered around safety concerns, infrastructure, and how micromobility could complement existing public transportation networks were included.

The results showed several trends and concerns regarding the adoption of micromobility in the city, with some key highlights being:

- **Interest in Adoption**: A substantial portion of respondents, 68%, expressed interest in using micromobility options either for short intra-city trips or for daily commuting. This is an indicator of strong potential for uptake, provided the infrastructure and safety concerns are met.
- **Safety concerns**: As is echoed throughout multiple research paper on the subject, safety is a significant barrier to adoption. 48% of the respondents expressed concerns about the lack of dedicated infrastructure, noting a lack of bike lanes and paths for e-mobility devices, as well as the absence of proper lighting and signage as contributing to these concerns.

- **Complementary to public transit**: 54% of respondents viewed micromobility as a useful potential complement to public transportation, with many highlighting its potential as a first-mile/last-mile solution.

The survey indicates a generally favorable attitude to micromobility as a viable transportation option. However, significant challenges, those related to safety and infrastructure must be addressed in order to facilitate widespread adoption. Responses highlight the need for investment in infrastructure, better public awareness campaigns, and policy support to establish micromobility as a component of Kamloops' transportation system.

It is important to note, that the survey received 87 respondents in total, with a majority of respondents being university students. Thus to be able to make substantial claims about the data recorded the survey will be reopened in collaboration with city planners to collect more responses and the data will be reanalyzed.
(Appendix A: General Perceptions of Micromobility In Kamloops)

4. Current State of Micromobility in British Columbia

To help carry the province towards a balanced and sustainable future in transportation with cleaner and more efficient technologies, an initiative of CleanBC, The Active Transportation Design Guide was created. This guide is the province's plan to help communities to initiate development projects by providing best practices on implementation and monitoring. This document serves as a good starting point/reference document for an BC community looking to develop or upgrade their active transportation network. In contains varied information ranging from dedicated structures like pedestrian and cycling facilities, multi-use facilities, to city integration with end-point facilities, and monitoring and reporting standards. It also presents storage and operation guidelines for e-mobility and recommendations on the safe implementation of shared-mobility models (CleanBC, 2019).

This guiding document is further supported by federal and provincial infrastructure development grants aimed at improving safety, local economy and tourism, local environment, mental and physical health, accessibility and equity, and community connectivity. The province provides cost-sharing for infrastructure and planning project up to a maximum of $500,000 and $50,000 respectively (Government of British Columbia, 2023). Federal support comes in the form of the Active Transportation Fund (ATF), which offers two funding streams, planning projects or capital projects. Federal funding for planning projects also goes to a maximum of $50,000, while for capital projects with a maximum contribution of $50 million, depending on the recipient and project location, the project can be from 40%-100% funded (Government of Canada, 2024). As of this writing, 80 active transportation infrastructure projects are being supported across the province totalling $24 million from the provincial government (Government of British Columbia News, 2024).

As communities across the province sign onto micromobility, they strengthen its ability to engage in regional planning by gathering data in its iterative policy learning. Following the renewal of the E-Kick Scooter Pilot 8 cities joined; the cities of North Vancouver and Port

Moody, the Districts of Central Saanich, North Vancouver, and Oak Bay, and the towns of Sidney, View Royal and Esquimalt (Government of British Columbia, 2024). Although the participating communities continue to grow, there remains room for exploration into shared mobility services with less than half of the participants having issued Requests For Proposals. The continued encouragement to explore active modes will help lead the province to its sustainable transportation goals.

Although micromobility has grown in popularity globally with a number of studies undertaken and currently ongoing, in the context of British Columbia there are lacunae present. The main performance evaluator for shared mobility services in BC is the tracking of vehicle miles replaced calculated through device data and user survey responses (Geneau Z., personal communication, April 17, 2024). This leaves many areas of its effects unstudied. With the numerous incentive programs available it would be worthwhile to study their effect on adoption of micromobility in communities. The importance of safety data must not be understated, ongoing studies must be in place to protect users from harm on these devices by giving recommendations to policy makers. Other areas that stand to hold fruitful information include, understanding the impact on traffic congestion and potential for public transport integration, the economic implications of a transportation mode change, and user behavior. Through the complete understanding of the effects of new modes of transportation, we can take ourselves closer to changing travel behaviours and systems that have been in place for decades.

5. Discussion

Micromobility has the potential to act as “the missing link” in urban transportation networks enhancing individual’s travel accessibility and offering an additional mode for short-distance trips (1-3 km) (Reck et al., 2022). This emerging transportation mode supports the expansion of public transit systems by increasing individual access to transit stations, thereby extending the coverage area of each station (Reck et al., 2022). European studies have shown linkages to increased public transit usage brought about by the increased accessibility provided by micromobility options. However, very few studies in British Columbia and Canada in general have explored this connection between micromobility and public transit systems and its effects on travel patterns and behaviors. As the country continues to advance the development of sustainable transportation, it is recommended that research address the lacuna in local knowledge.

Consistent with the findings of Olabi et al. (2022), micromobility in Kamloops and other cities in BC can contribute to goals related to environmental sustainability, social equity, and economic development. The reduction in private car usage and the subsequent decrease in greenhouse gas emissions align with efforts to combat climate change leading to a reduction in urban air pollution and traffic congestion. Furthermore, affordable and accessible travel options can enhance social inclusion, especially when coupled with equity programs. In British Columbia, the promotion of micromobility could complement existing sustainability initiatives, potentially accelerating the individual cities’ progress towards climate action goals.

Enhancing micromobility infrastructure could stimulate local economies by increasing foot traffic to businesses and reducing transportation costs for residents. Socially, micromobility promotes inclusivity and equity. It can provide viable transportation options for individuals who may not have access to private vehicles, thereby enhancing mobility for low-income and marginalized groups. This can help reduce social disparities and improve overall quality of life, aligning with social equity related development goals.

Despite its potential, the implementation of micromobility solutions is not without challenges. Safety concerns, regulatory frameworks, and infrastructure development are critical areas that need addressing. With many considerations to be taken into account, micromobility is operations are very dynamic environments that must respond to changing needs of the city and the people. To gain public support and ensure that these solutions are relevant to the local context it is essential to engage the community in the planning and implementation of micromobility initiatives. Community feedback can provide valuable insights and help identify potential issues early on, leading to more user-centric and accepted micromobility systems.

Full incorporation and adoption of micromobility into cities fundamentally changes urban dynamics, leading to more pedestrianism and safer streets. This transformation fosters a more vibrant urban environment, where streets are designed for people rather than cars. The idea of ‘complete streets’ arises often in active transportation literature (CleanBC, 2019). Intended to be safe, comfortable, and accessible, they are roads that balance safety, access, and comfort for users of all modes, as opposed to the historic car-centric North American road design. They are seen as a positive by-product of active transportation design with various benefits including increased safety, sustainability, and cost effectiveness. For complete streets to emerge, it is necessary for essential amenities and services to be easily accessible in order to cater for a community oriented towards pedestrianism. Additionally, the digital nature of micromobility operations paves the way for smart cities, where transportation systems are seamlessly connected, improving efficiency and user experience.

Micromobility is a powerful addition to a city’s arsenal of green initiatives as it embarks on the road to building a sustainable city. British Columbia’s experimental approach serves as an ideal setting to explore and understand the full potential of micromobility within Canada’s broader sustainability efforts. It is imperative to address the existing research gaps by conducting more studies and encouraging pilot projects across the province. Such initiatives will enhance the quality of data collected, supporting informed decision-making and the optimization of micromobility solutions.

References

Aba A. & Esztergár-Kiss D. (2023). Electric micromobility from a policy-making perspective through European use cases. *Environment, Development and Sustainability*. https://doi.org/10.1007/s10668-023-03016-3

Capital Regional District (CRD) Traffic Safety Commission (TSC) (2024). *Micro-mobility Brief to the Traffic Safety Commission.* https://www.crd.bc.ca/docs/default-source/crd-document-library/committeedocuments/transportation-committee/20240221/2024-02-21tcagendacover.pdf?sfvrsn=9a91d0ce_5

Chicco A. & Diana M. (2022). Understanding micro-mobility usage patterns: a preliminary comparison between dockless bike sharing and e-scooters in the city of Turin (Italy). *Transportation Research Procedia 62 (2022), 459–466*.

City of Kamloops (2010). *In-line skates, skateboards and scooters control bylaw 23-63.* https://kamloops.civicweb.net/document/8243/

City of Kamloops (2010). *Bicycle Master Plan (BMP)*. https://www.kamloops.ca/sites/default/files/docs/city-hall/10-05-31-bmp.pdf

City of Kamloops (2018). *Transportation Master Plan (TMP)*. https://www.kamloops.ca/sites/default/files/2022-01/kamloops_transportation_master_plan_v2_-_comments_0.pdf

City of Kamloops (2020). *Electric vehicle and electric bike strategy.* https://kamloops.civicweb.net/filepro/document/119321/Attachment.pdf?__cf_chl_tk=ekVUSZJJdhkakjI6aD6pTA3austRJ_RMKu.bPby50KE-1717476438-0.0.1.1-4287

City of Kamloops (2024). *Active transportation plan*. https://letstalk.kamloops.ca/atplan

City of Kamloops (2024). *Go electric rebate incentives*. https://www.kamloops.ca/our-community/environment-sustainability/go-electric-kamloops/rebate-incentives

CleanBC (2019) *British Columbia active transportation design guide*. https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/active-transportation-guide/2019-06-14_bcatdg_compiled_digital.pdf

Frisbee N., Dyce B., Wray A., Bradford N., Lee J. & Gilliland J. (2022). Muddling through e-scooters, an impending wave of e-bikes: examining policy approaches to light electric vehicles in Canada's transportation system. *SSRN*. http://dx.doi.org/10.2139/ssrn.4050232

Government of British Columbia (2023). *B.C. active transportation infrastructure grants program.* https://www2.gov.bc.ca/gov/content/transportation/funding-engagement-permits/funding-grants/active-transportation-infrastructure-grants

Government of British Columbia. (2024). *Electric kick scooter pilot project.* https://www2.gov.bc.ca/gov/content/transportation/transportation-environment/active-transportation/scooter

Government of British Columbia News (2024). *B.C. builds cleaner communities with active transportation.* https://news.gov.bc.ca/releases/2024MOTI0039-000416

Government of Canada (2024). *Active transportation fund*. https://www.infrastructure.gc.ca/trans/index-eng.html

Medina-Molina C. & Rey-Moreno M. (2023). The determinant conditions and causal mechanisms that explain the use of micromobility services. *Management Letters / Cuadernos de Gestión*. https://doi.org/10.5295/cdg.231965cm

Motor Vehicle Act, RSBC 1996, c 318
Motor Vehicle Amendment Act, 2023, S.B.C. 2023, c. 17.
https://www.bclaws.gov.bc.ca/civix/document/id/oic/oic_cur/0148_2024

Olabi A.G., Wilberforce T., Obaideen K., Sayed E.T., Shehata N., Alamia A.H, Abdelkareema M.A. (2023). Micromobility: progress, benefits, challenges, policy and regulations, energy sources and storage, and its role in achieving sustainable development goals. *International Journal of Thermofluids* https://doi.org/10.1016/j.ijft.2023.100292

Reck D.J. & Axhausen K.W. (2021). Who uses shared micro-mobility services? empirical evidence from Zurich, Switzerland. *Transportation Research Part D.* https://doi.org/10.1016/j.trd.2021.102803

Reck D.J., Martin H., Axhausen K.W. (2022). Mode choice, substitution patterns and environmental impacts of shared and personal micro-mobility. *Transportation Research Part D* https://doi.org/10.1016/j.trd.2021.103134

Statista. (2024, March). *E-scooter-sharing - canada: statista market forecast* https://www.statista.com/outlook/mmo/shared-mobility/e-scooter-sharing/canada

Statistics Canada (2023). *Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001.* https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E

The Canadian Coalition for Green Health Care [Green Health Care] (2024). *Battery-powered micro-mobility rules and regulations* [Fact sheet]. https://greenhealthcare.ca/wp-content/uploads/2024/03/55-23-BPMM-Rules-Regulations-FINAL-EN.pdf

Thompson Rivers University (2023) *Cycling programs*. https://www.tru.ca/transportation/cycling/programs.html

Travers, Reed K., Hall P. V., Scott N, Winters M., Kwan G. & Park K. (2022). Transportation planning, policy, and electric micro-mobilities: a knowledge synthesis of recent publications. *Sociology and Anthropology.* https://summit.sfu.ca/item/31897

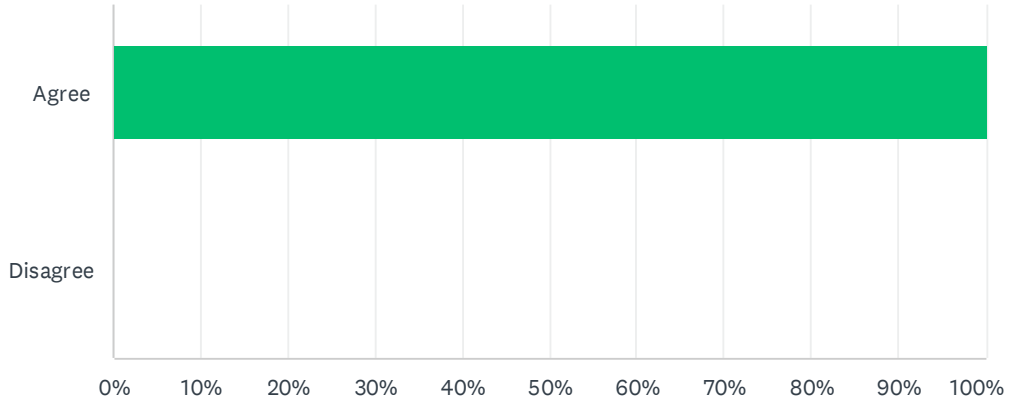
Zhang L. & Song J. (2022). The periodicity and initial evolution of micro-mobility systems: a case study of the docked bike-sharing system in New York City, USA. *European Transport Research Review (2022) 14:27*. https://doi.org/10.1186/s12544-022-00549-y

Appendix

Appendix A: Survey – General Perceptions of Micromobility in Kamloops → See next page.

Q1 If you are 16 years of age or older, understand the statements above, and consent to participate in the study, click the “I agree” button to begin the survey. By clicking “I agree” and filling out this survey, you are consenting to participate.

Answered: 87 Skipped: 0



ANSWER CHOICES	RESPONSES	
Agree	100.00%	87
Disagree	0.00%	0
TOTAL		87

Q2 Optional: Please provide an identifier(s) for your survey entry. This will be kept confidential and only used should you wish to either withdraw your responses or enter the prize draw($250).

Answered: 75 Skipped: 12

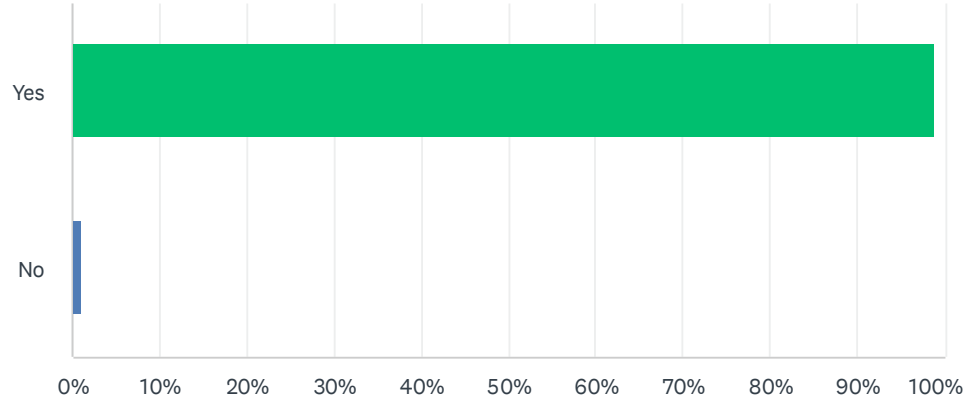
ANSWER CHOICES	RESPONSES	
Withdrawal identifier (e.g. initials (i.e. something you will remember)):	86.67%	65
Email (Prize draw entry):	92.00%	69

#	WITHDRAWAL IDENTIFIER (E.G. INITIALS (I.E. SOMETHING YOU WILL REMEMBER)):	DATE

Identifiers have been removed from survey results.

Q3 Do you live in Kamloops?

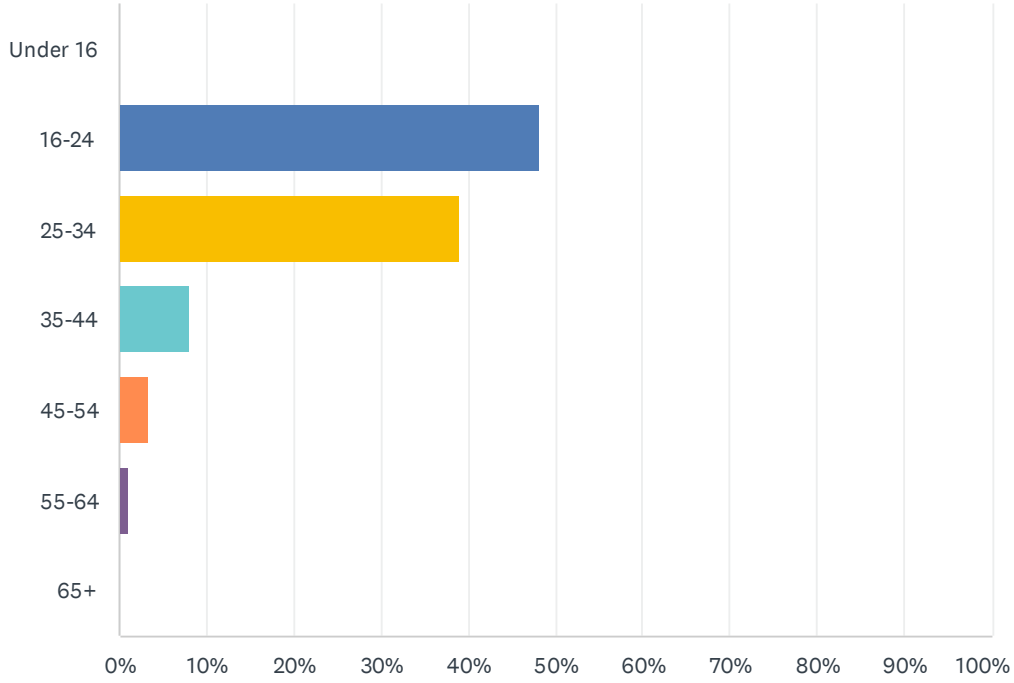
Answered: 87 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	98.85%	86
No	1.15%	1
TOTAL		87

Q4 What is your age?

Answered: 87 Skipped: 0

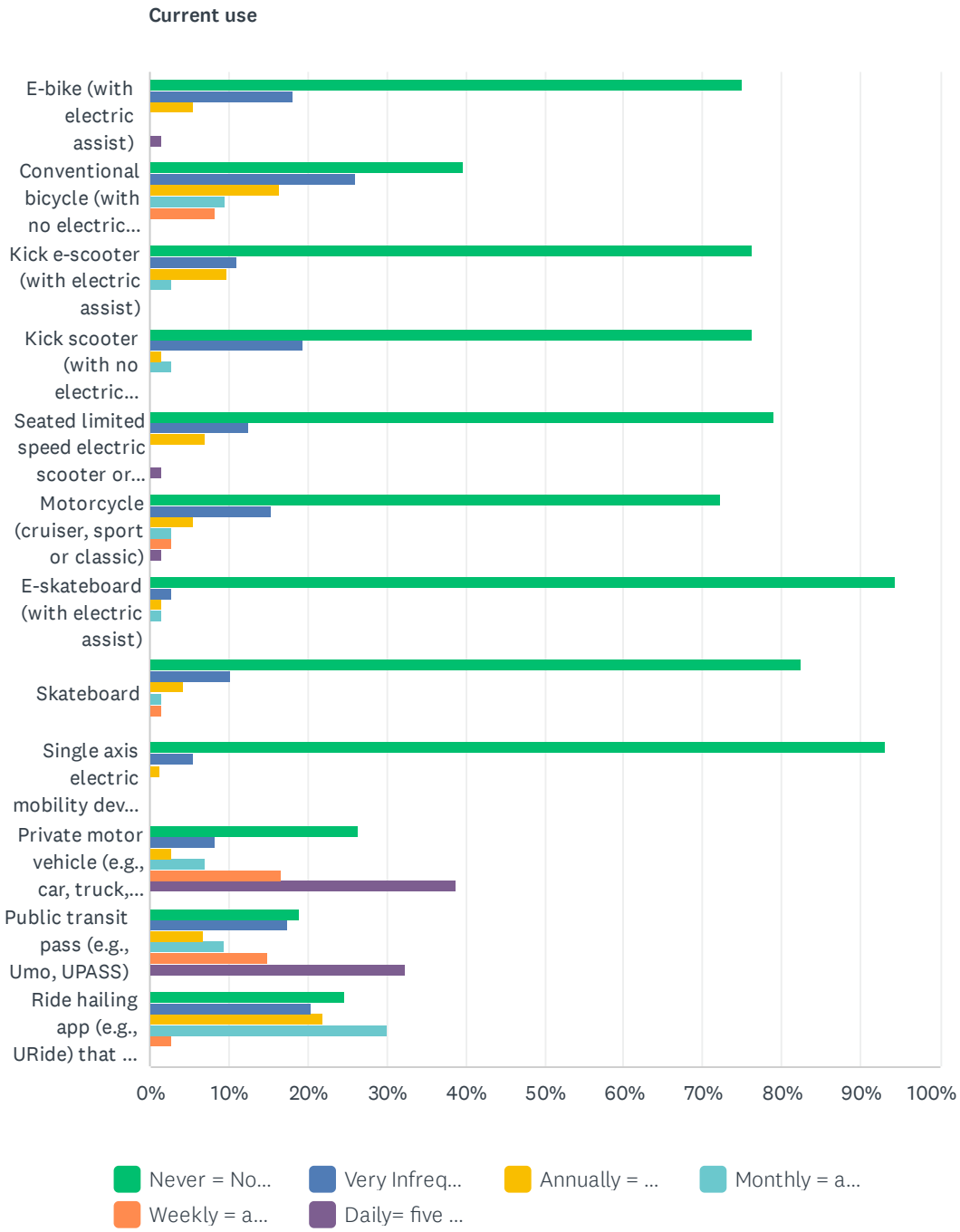


ANSWER CHOICES	RESPONSES	
Under 16	0.00%	0
16-24	48.28%	42
25-34	39.08%	34
35-44	8.05%	7
45-54	3.45%	3
55-64	1.15%	1
65+	0.00%	0
TOTAL		87

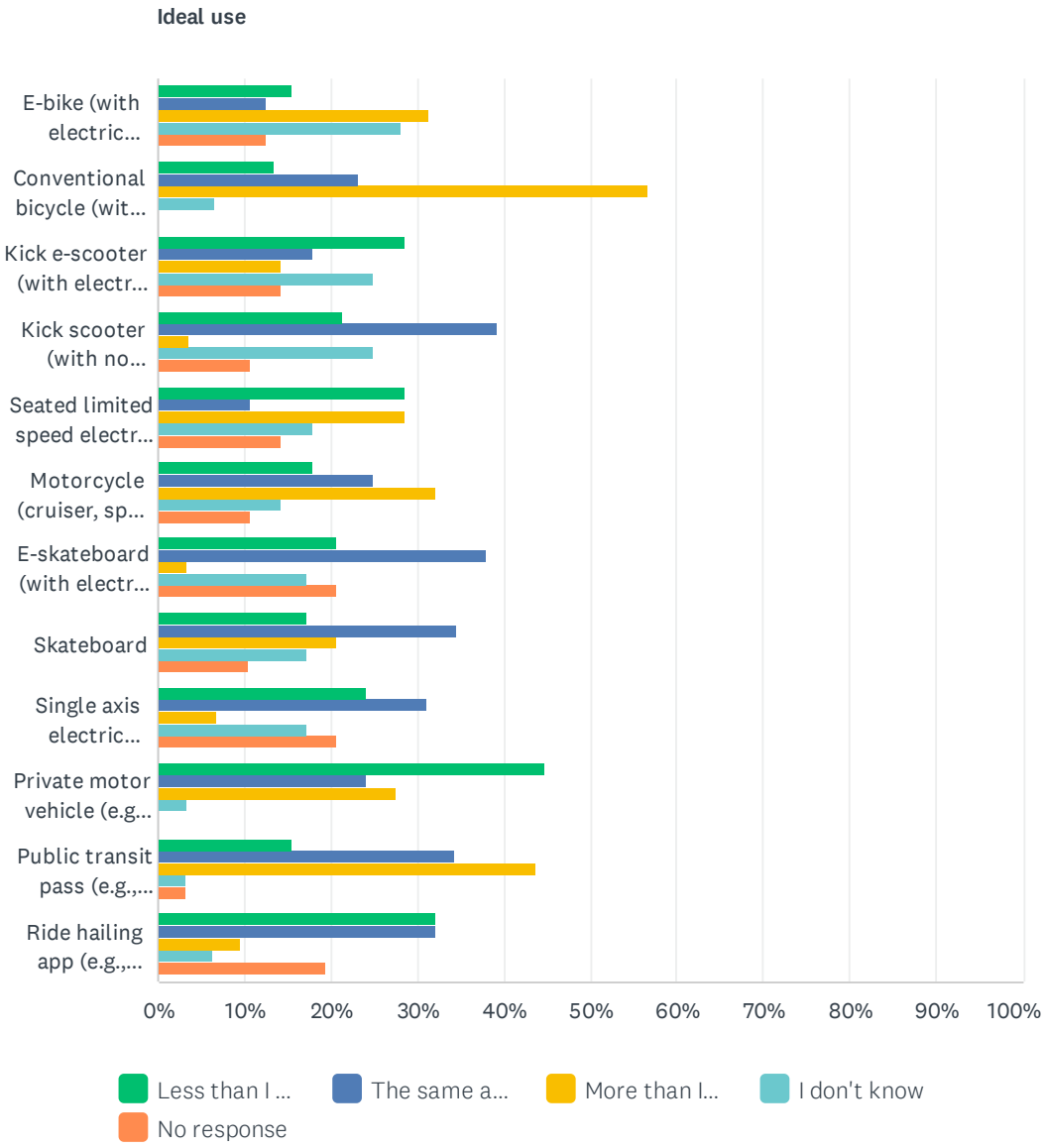
Q5 How often do you currently use the following? And How often would you ideally like to use them?

Answered: 75 Skipped: 12

General Perceptions of Micromobility in Kamloops



General Perceptions of Micromobility in Kamloops



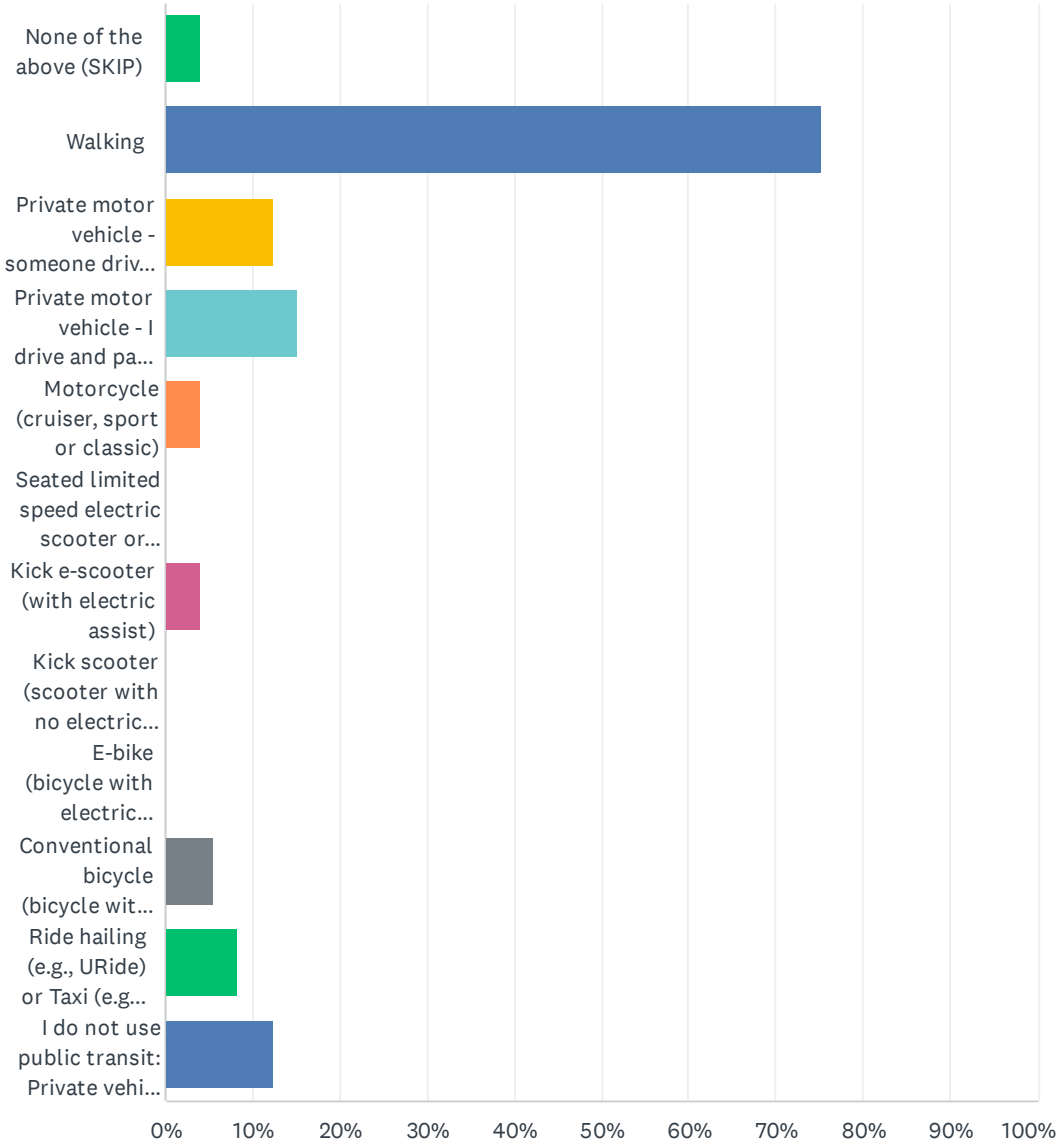
Current use	NEVER = NOT ONCE	VERY INFREQUENTLY= ONCE OR TWICE IN THE LAST FEW YEARS	ANNUALLY = AT LEAST ONCE A YEAR BUT NOT MONTHLY	MONTHLY = AT LEAST ONCE A MONTH BUT LESS THAN ONCE A WEEK	WEEKLY = AT LEAST ONCE A WEEK BUT NOT DAILY	DAILY= FIVE OR MORE DAYS A WEEK	TOTAL
E-bike (with electric assist)	75.00% 54	18.06% 13	5.56% 4	0.00% 0	0.00% 0	1.39% 1	72
Conventional bicycle (with no electric assist)	39.73% 29	26.03% 19	16.44% 12	9.59% 7	8.22% 6	0.00% 0	73
Kick e-scooter (with electric assist)	76.39% 55	11.11% 8	9.72% 7	2.78% 2	0.00% 0	0.00% 0	72
Kick scooter (with no electric assist)	76.39% 55	19.44% 14	1.39% 1	2.78% 2	0.00% 0	0.00% 0	72
Seated limited speed electric scooter or moped	79.17% 57	12.50% 9	6.94% 5	0.00% 0	0.00% 0	1.39% 1	72
Motorcycle (cruiser, sport or classic)	72.22% 52	15.28% 11	5.56% 4	2.78% 2	2.78% 2	1.39% 1	72
E-skateboard (with electric assist)	94.44% 68	2.78% 2	1.39% 1	1.39% 1	0.00% 0	0.00% 0	72
Skateboard	82.61% 57	10.14% 7	4.35% 3	1.45% 1	1.45% 1	0.00% 0	69
Single axis electric mobility device (unicycle, hoverboard, Segway)	93.15% 68	5.48% 4	1.37% 1	0.00% 0	0.00% 0	0.00% 0	73
Private motor vehicle (e.g., car, truck, van, SUV)	26.39% 19	8.33% 6	2.78% 2	6.94% 5	16.67% 12	38.89% 28	72
Public transit pass (e.g., Umo, UPASS)	18.92% 14	17.57% 13	6.76% 5	9.46% 7	14.86% 11	32.43% 24	74
Ride hailing app (e.g., URide) that you use frequently	24.66% 18	20.55% 15	21.92% 16	30.14% 22	2.74% 2	0.00% 0	73

Ideal use	LESS THAN I DO NOW	THE SAME AS I DO NOW	MORE THAN I DO NOW	I DON'T KNOW	NO RESPONSE	TOTAL
E-bike (with electric assist)	15.63% 5	12.50% 4	31.25% 10	28.13% 9	12.50% 4	32
Conventional bicycle (with no electric assist)	13.33% 4	23.33% 7	56.67% 17	6.67% 2	0.00% 0	30
Kick e-scooter (with electric assist)	28.57% 8	17.86% 5	14.29% 4	25.00% 7	14.29% 4	28
Kick scooter (with no electric assist)	21.43% 6	39.29% 11	3.57% 1	25.00% 7	10.71% 3	28
Seated limited speed electric scooter or moped	28.57% 8	10.71% 3	28.57% 8	17.86% 5	14.29% 4	28
Motorcycle (cruiser, sport or classic)	17.86% 5	25.00% 7	32.14% 9	14.29% 4	10.71% 3	28
E-skateboard (with electric assist)	20.69% 6	37.93% 11	3.45% 1	17.24% 5	20.69% 6	29
Skateboard	17.24% 5	34.48% 10	20.69% 6	17.24% 5	10.34% 3	29
Single axis electric mobility device (unicycle, hoverboard, Segway)	24.14% 7	31.03% 9	6.90% 2	17.24% 5	20.69% 6	29
Private motor vehicle (e.g., car, truck, van, SUV)	44.83% 13	24.14% 7	27.59% 8	3.45% 1	0.00% 0	29
Public transit pass (e.g., Umo, UPASS)	15.63% 5	34.38% 11	43.75% 14	3.13% 1	3.13% 1	32
Ride hailing app (e.g., URide) that you use frequently	32.26% 10	32.26% 10	9.68% 3	6.45% 2	19.35% 6	31

Q6 What mode(s) do you use most often to get to and from public transit?

Answered: 73 Skipped: 14

General Perceptions of Micromobility in Kamloops

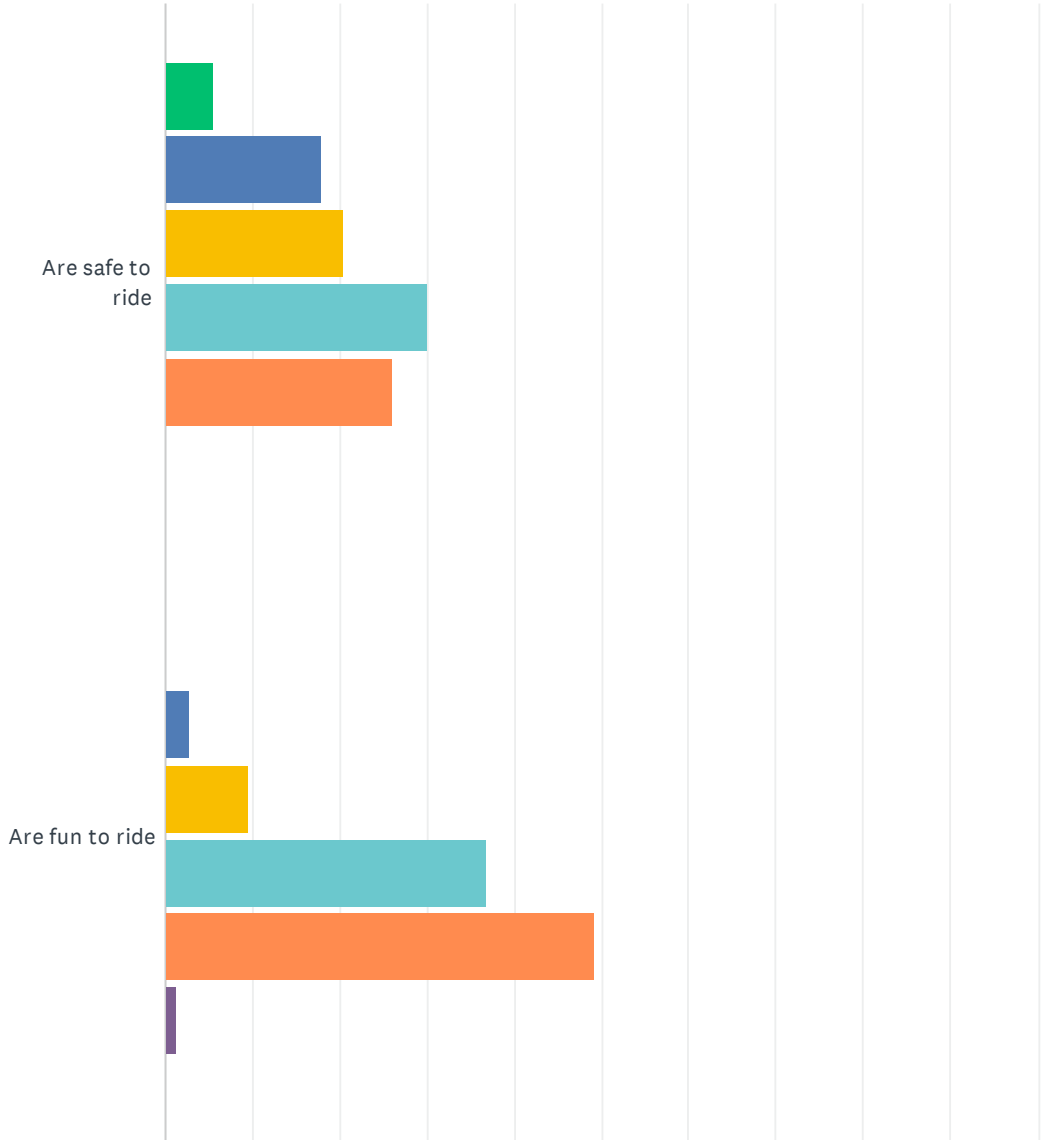


ANSWER CHOICES	RESPONSES	
None of the above (SKIP)	4.11%	3
Walking	75.34%	55
Private motor vehicle - someone drives me and drops me off at the stop or station	12.33%	9
Private motor vehicle - I drive and park at or near the stop or station	15.07%	11
Motorcycle (cruiser, sport or classic)	4.11%	3
Seated limited speed electric scooter or moped	0.00%	0
Kick e-scooter (with electric assist)	4.11%	3
Kick scooter (scooter with no electric assist)	0.00%	0
E-bike (bicycle with electric assist)	0.00%	0
Conventional bicycle (bicycle with no electric assist)	5.48%	4
Ride hailing (e.g., URide) or Taxi (e.g., Yellow Cabs, Kami Cabs)	8.22%	6
I do not use public transit: Private vehicle or Other (please specify)	12.33%	9
Total Respondents: 73		

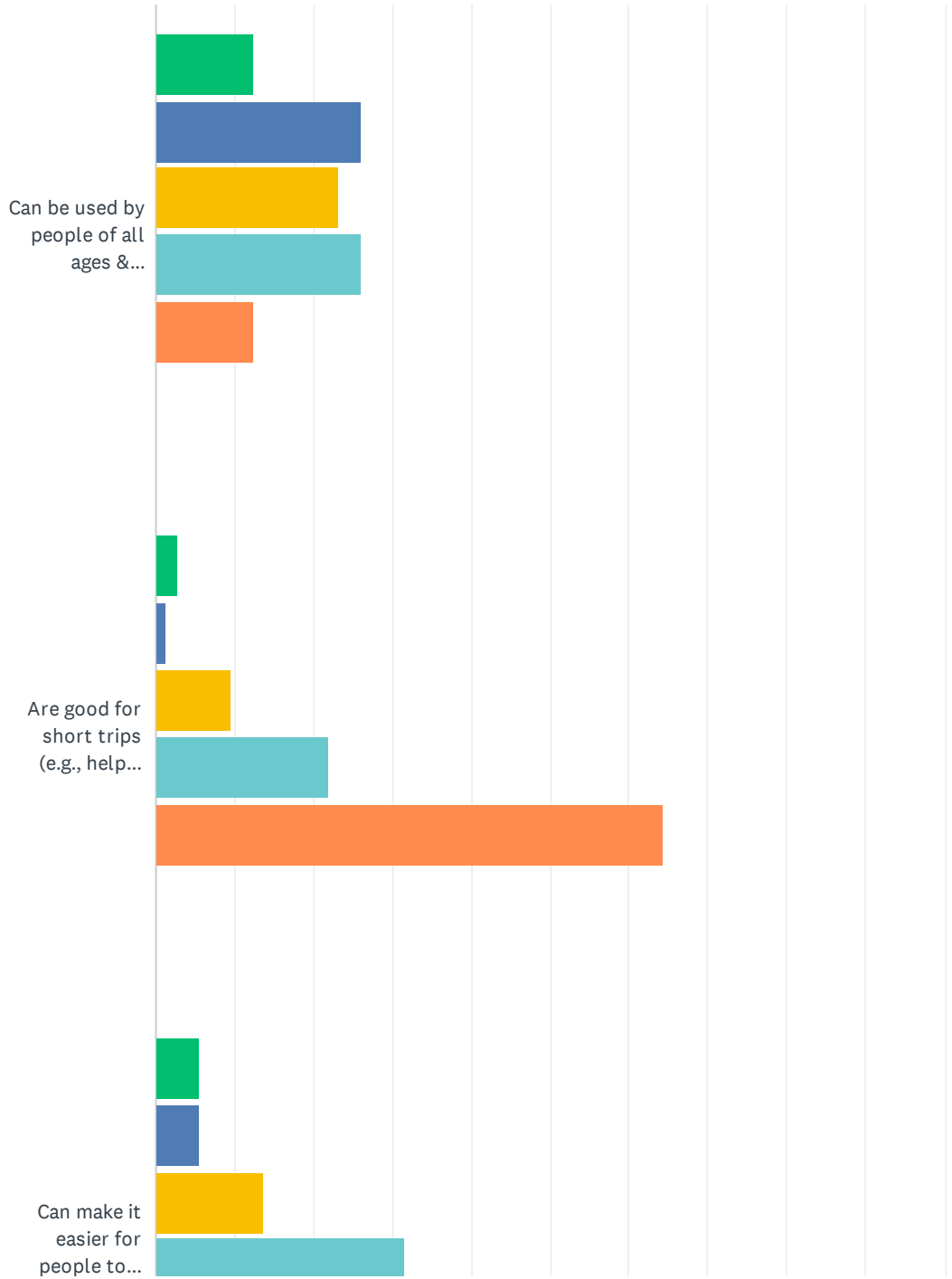
#	I DO NOT USE PUBLIC TRANSIT: PRIVATE VEHICLE OR OTHER (PLEASE SPECIFY)	DATE
1	I drive too, when I don't want to be late or have alot of stuff to bring	9/25/2024 9:28 AM
2	My own car	9/23/2024 9:51 AM
3	I use my private vehicle	9/19/2024 4:16 PM
4	Car	9/19/2024 4:14 PM
5	Private Vehicle	9/19/2024 4:10 PM
6	Car	9/19/2024 4:09 PM
7	I use my own vehicle	9/18/2024 10:03 AM
8	I drive my car	9/18/2024 10:02 AM
9	Private vehicle	9/13/2024 11:27 AM

Q7 How strongly do you agree or disagree with the following statements about e-bikes? I think e-bikes …

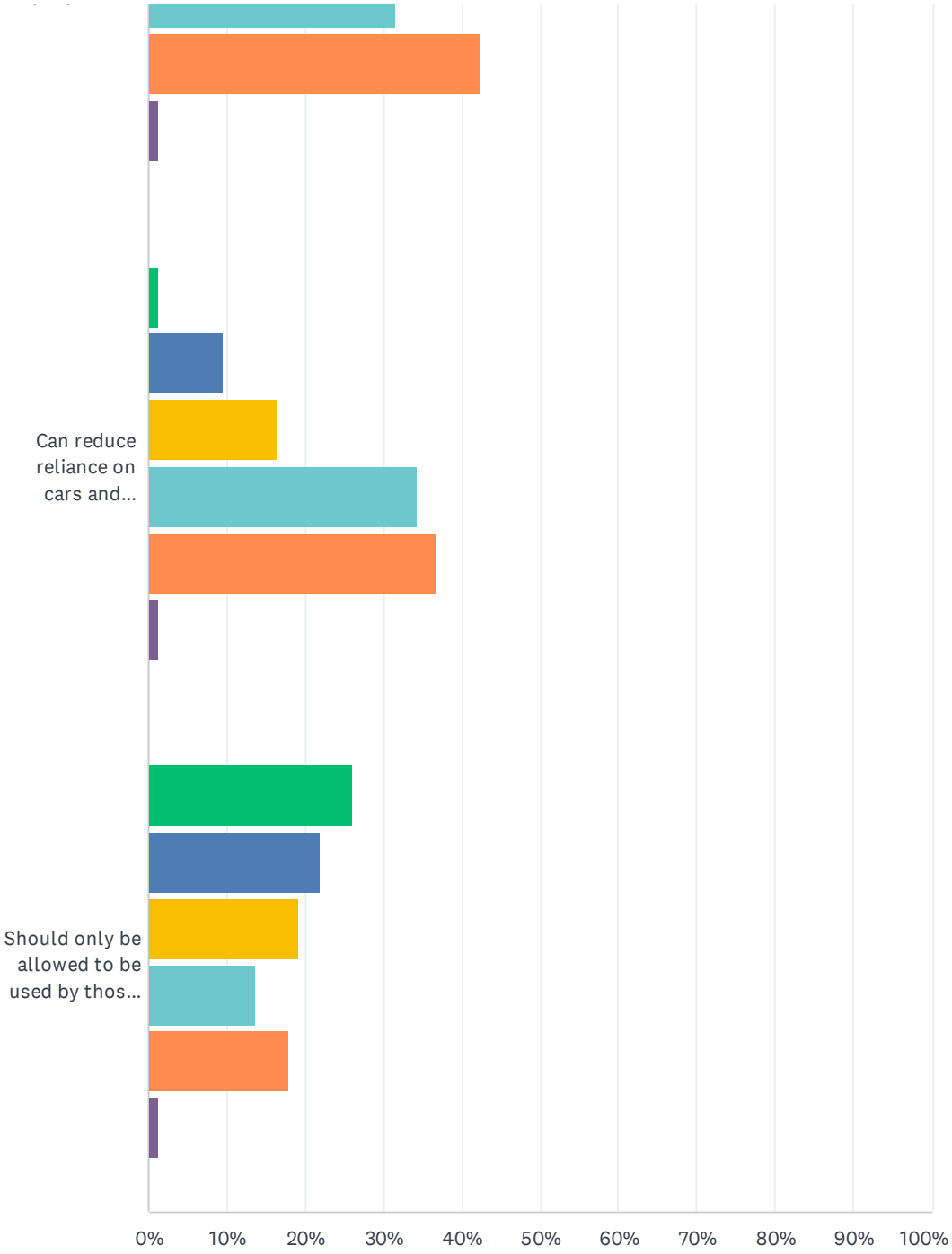
Answered: 73 Skipped: 14



General Perceptions of Micromobility in Kamloops



General Perceptions of Micromobility in Kamloops

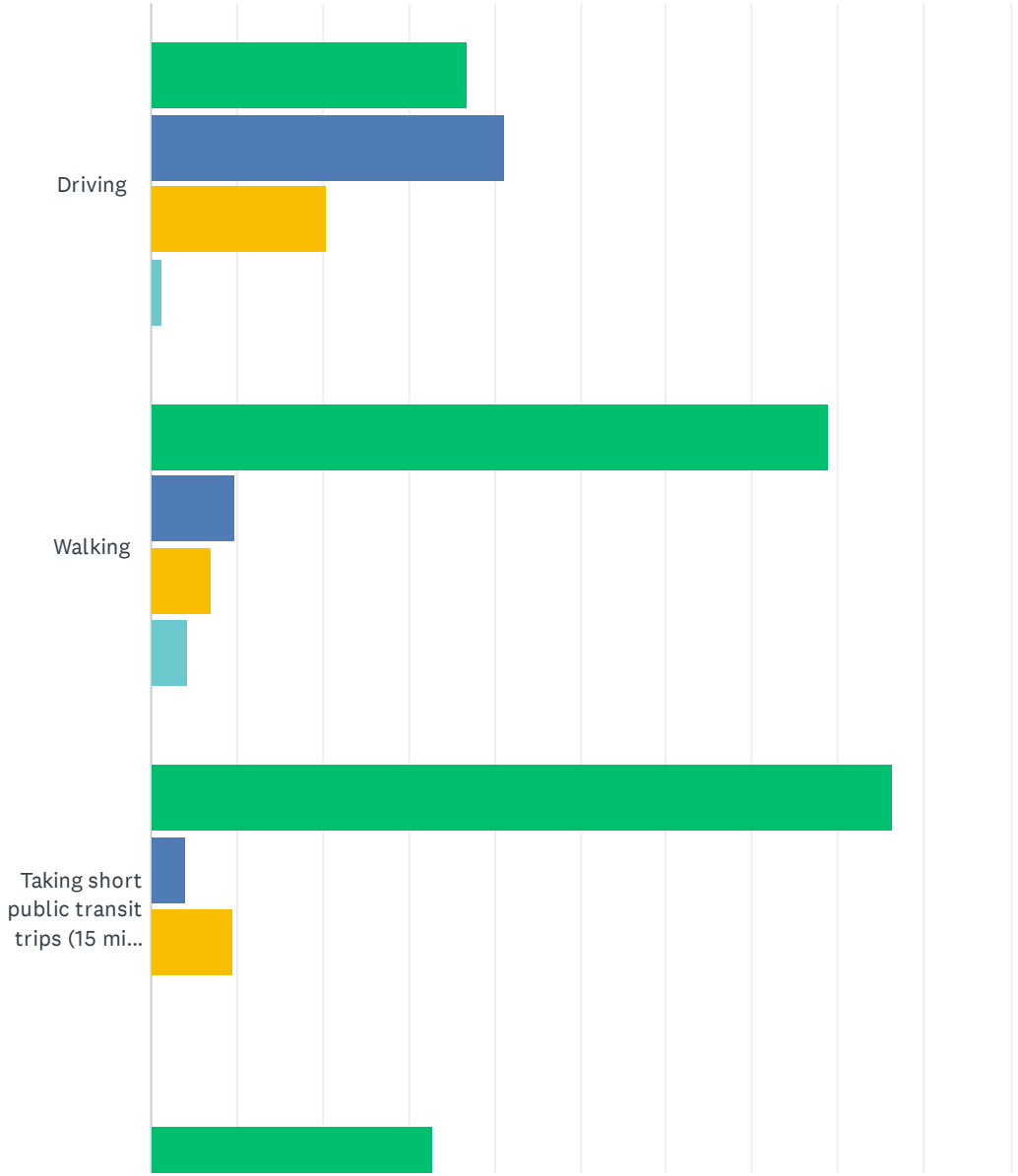


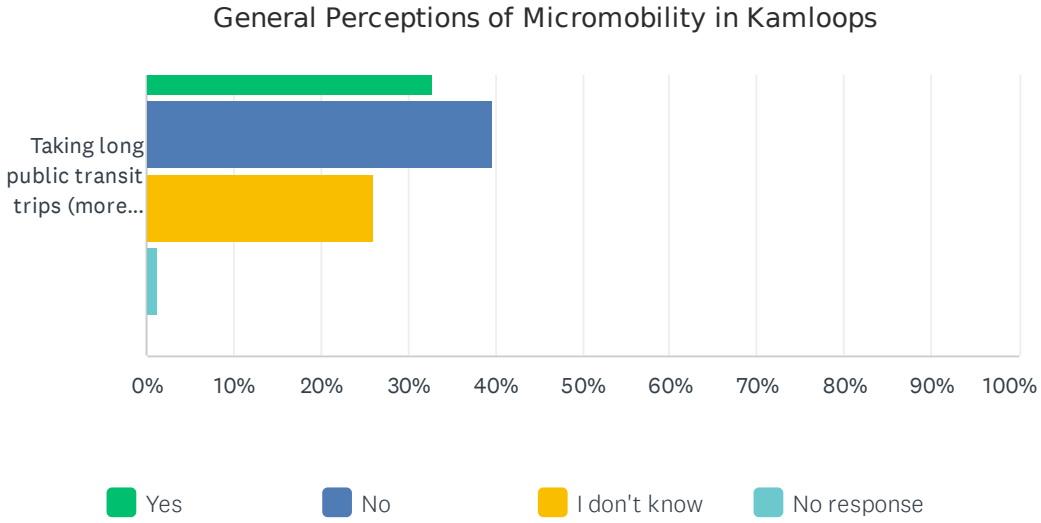
General Perceptions of Micromobility in Kamloops

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	NEUTRAL/I DON'T KNOW	SOMEWHAT AGREE	STRONGLY AGREE	NO RESPONSE	TOTAL
Are safe to ride	5.48% 4	17.81% 13	20.55% 15	30.14% 22	26.03% 19	0.00% 0	73
Are fun to ride	0.00% 0	2.74% 2	9.59% 7	36.99% 27	49.32% 36	1.37% 1	73
Can be used by people of all ages & abilities	12.33% 9	26.03% 19	23.29% 17	26.03% 19	12.33% 9	0.00% 0	73
Are good for short trips (e.g., help people get around faster or more easily)	2.74% 2	1.37% 1	9.59% 7	21.92% 16	64.38% 47	0.00% 0	73
Can make it easier for people to connect to public transit (i.e., could help with the "first and last mile" of transit trips)	5.48% 4	5.48% 4	13.70% 10	31.51% 23	42.47% 31	1.37% 1	73
Can reduce reliance on cars and therefore could reduce local/regional traffic congestion	1.37% 1	9.59% 7	16.44% 12	34.25% 25	36.99% 27	1.37% 1	73
Should only be allowed to be used by those with a driver's license	26.03% 19	21.92% 16	19.18% 14	13.70% 10	17.81% 13	1.37% 1	73

Q8 Do you think e-mobility devices are a good alternative to the following transportation modes?

Answered: 73 Skipped: 14



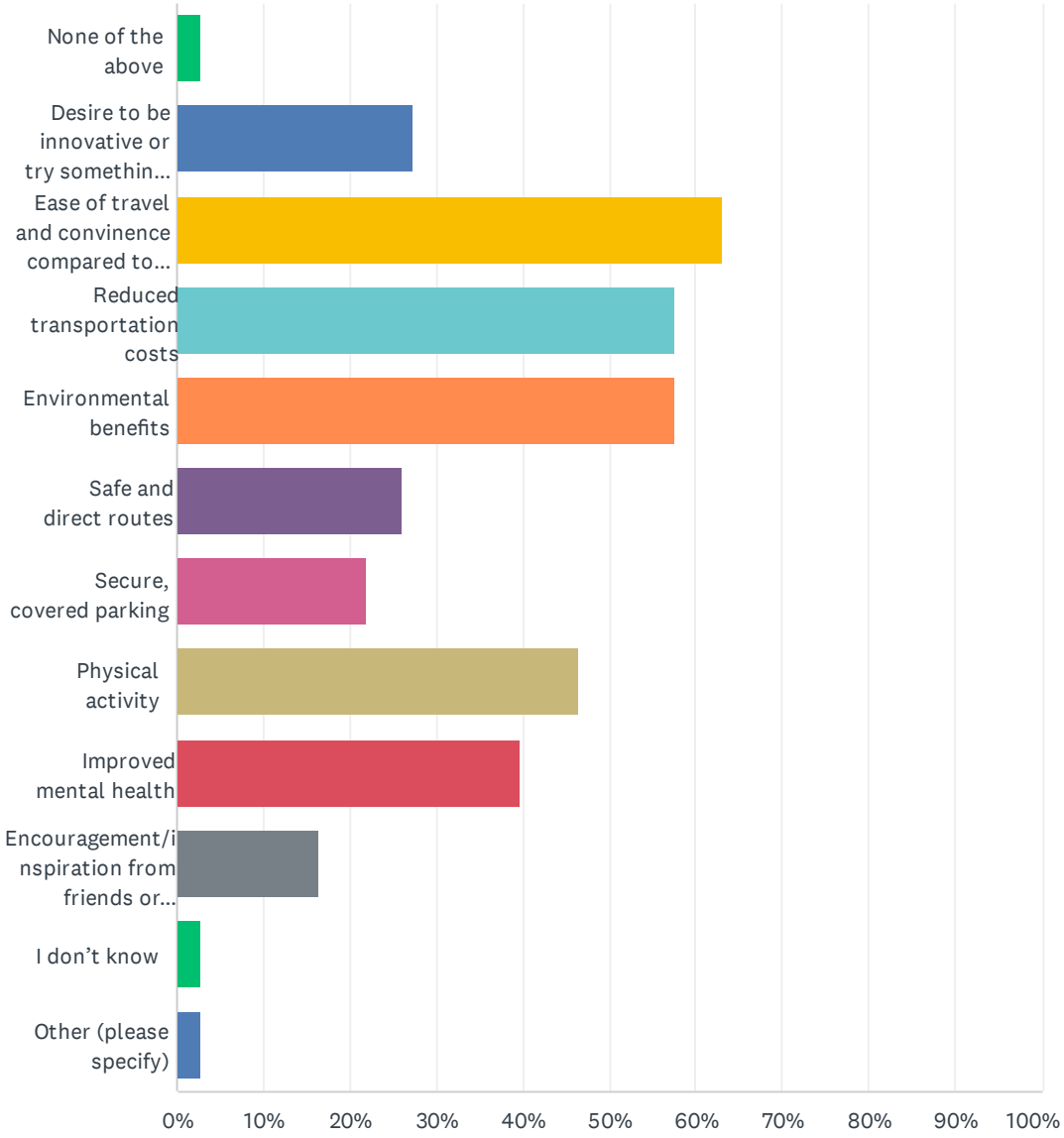


	YES	NO	I DON'T KNOW	NO RESPONSE	TOTAL
Driving	36.99% 27	41.10% 30	20.55% 15	1.37% 1	73
Walking	78.87% 56	9.86% 7	7.04% 5	4.23% 3	71
Taking short public transit trips (15 min or less)	86.30% 63	4.11% 3	9.59% 7	0.00% 0	73
Taking long public transit trips (more than 15 min)	32.88% 24	39.73% 29	26.03% 19	1.37% 1	73

Q9 Choose the top factors that make you WANT to ride an e-mobility device for transportation, if any.

Answered: 73 Skipped: 14

General Perceptions of Micromobility in Kamloops



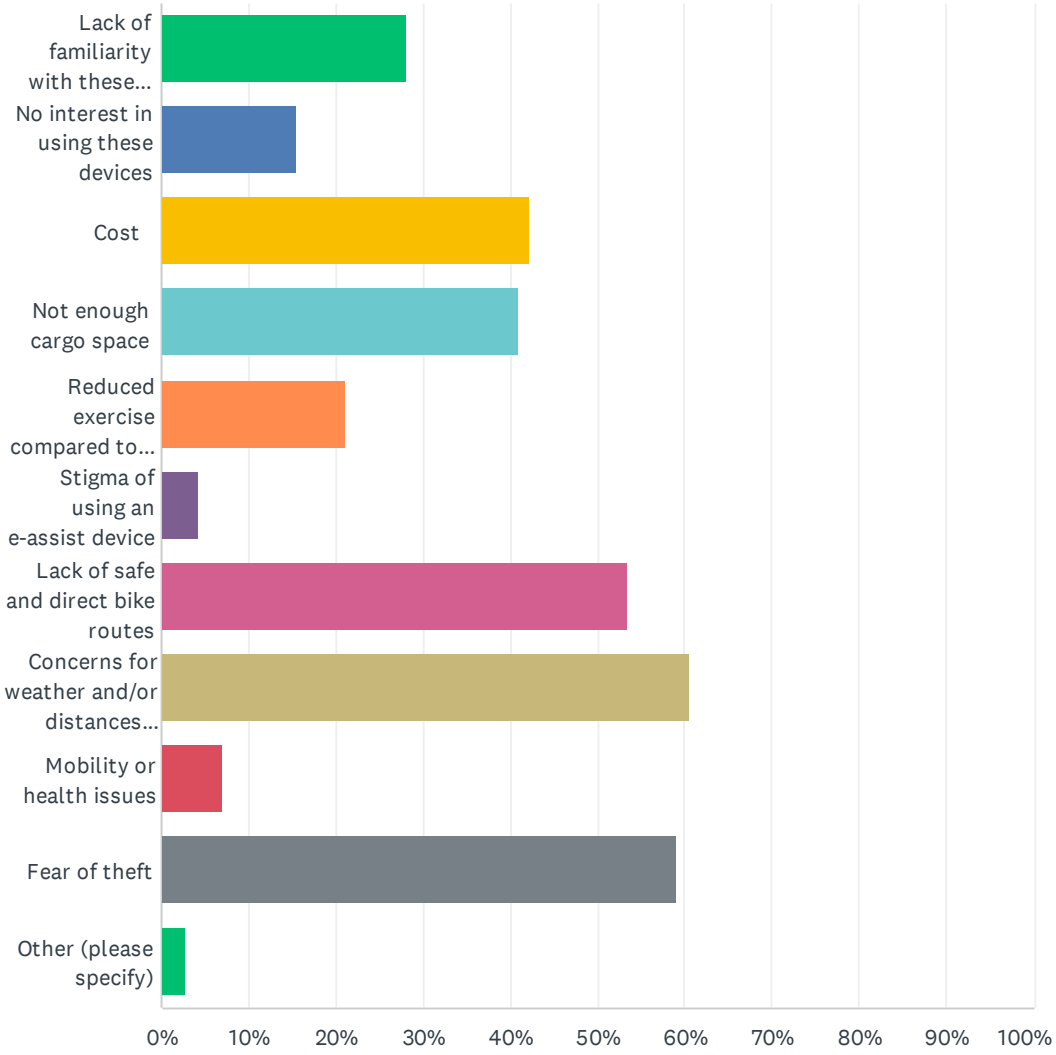
ANSWER CHOICES	RESPONSES	
None of the above	2.74%	2
Desire to be innovative or try something new	27.40%	20
Ease of travel and convinence compared to device with no assist (e.g., easier to climb hills, go further distances)	63.01%	46
Reduced transportation costs	57.53%	42
Environmental benefits	57.53%	42
Safe and direct routes	26.03%	19
Secure, covered parking	21.92%	16
Physical activity	46.58%	34
Improved mental health	39.73%	29
Encouragement/inspiration from friends or family to ride	16.44%	12
I don’t know	2.74%	2
Other (please specify)	2.74%	2
Total Respondents: 73		

#	OTHER (PLEASE SPECIFY)	DATE
1	Ready to use	9/19/2024 4:10 PM
2	Quicker in larger cities than public transport, walking or driving	9/19/2024 3:57 PM

Q10 Choose the top factors that make you NOT WANT to ride an e-mobility device for transportation, if any

Answered: 71 Skipped: 16

General Perceptions of Micromobility in Kamloops

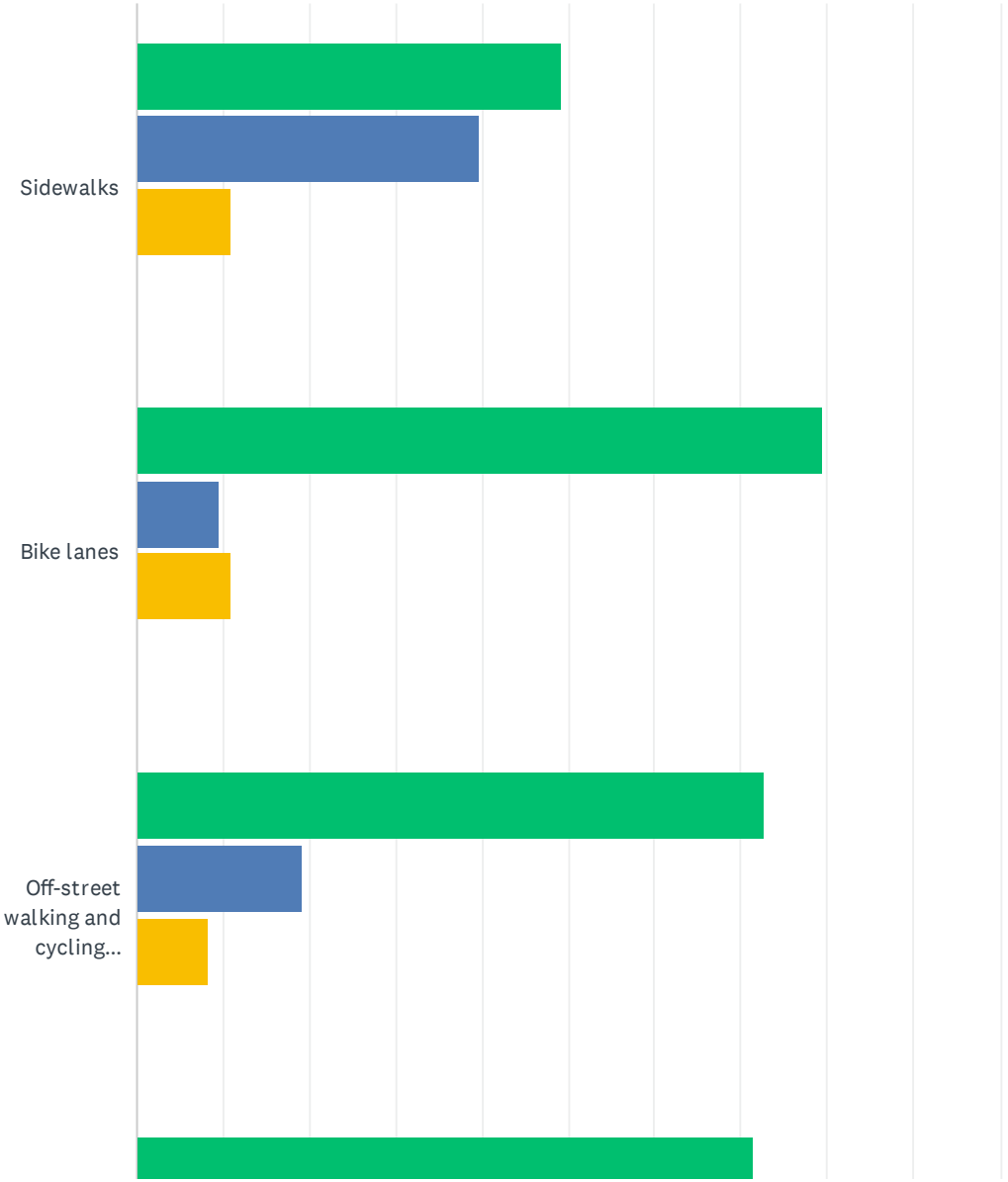


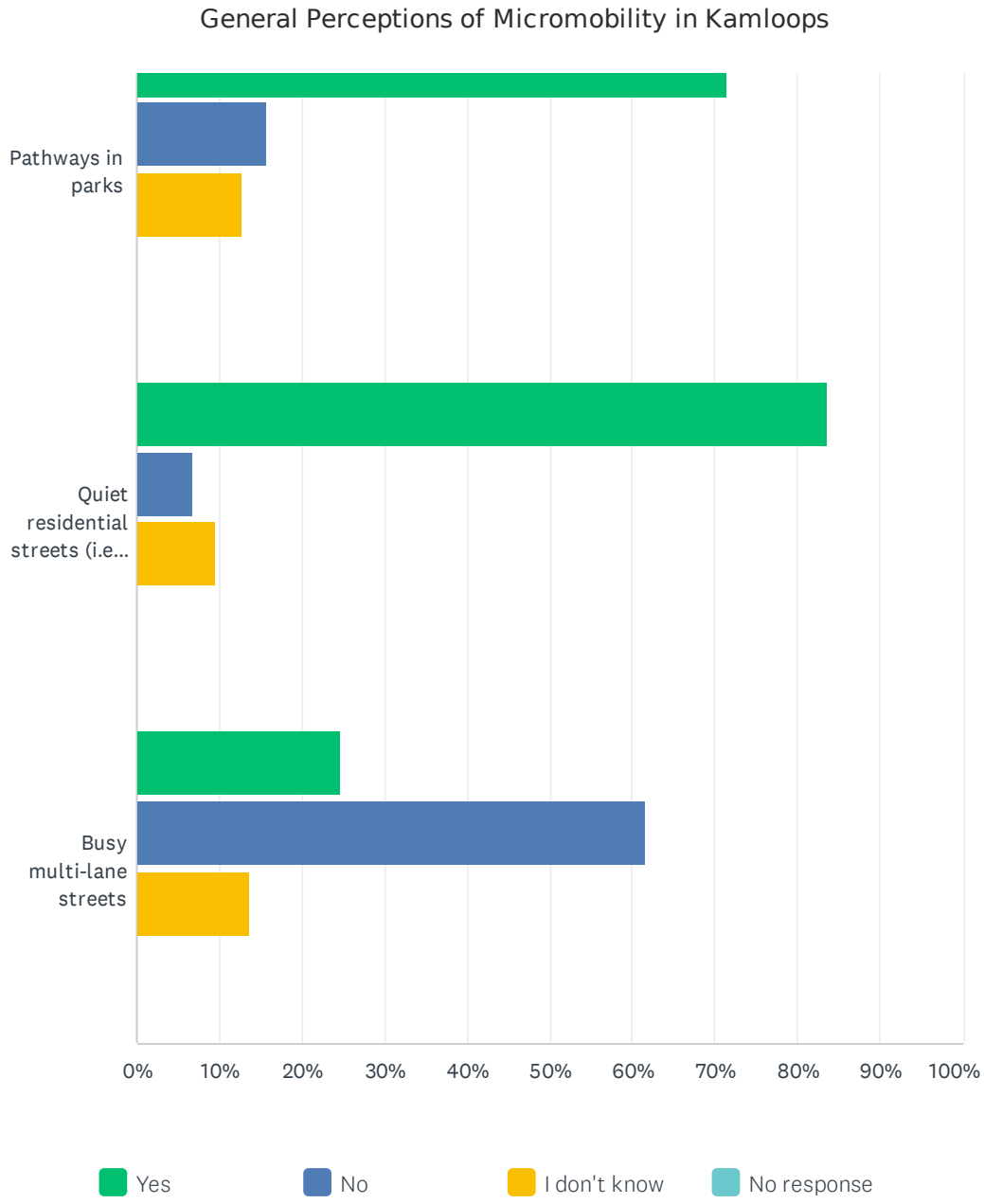
ANSWER CHOICES	RESPONSES	
Lack of familiarity with these devices and technology	28.17%	20
No interest in using these devices	15.49%	11
Cost	42.25%	30
Not enough cargo space	40.85%	29
Reduced exercise compared to using other active modes (e.g. walking, bike)	21.13%	15
Stigma of using an e-assist device	4.23%	3
Lack of safe and direct bike routes	53.52%	38
Concerns for weather and/or distances (being too far)	60.56%	43
Mobility or health issues	7.04%	5
Fear of theft	59.15%	42
Other (please specify)	2.82%	2
Total Respondents: 71		

#	OTHER (PLEASE SPECIFY)	DATE
1	None in my area	9/21/2024 8:49 PM
2	Winter time doesn't work for me	9/19/2024 6:29 PM

Q11 Do you think e-scooters should be permitted to ride in the following places?

Answered: 73 Skipped: 14



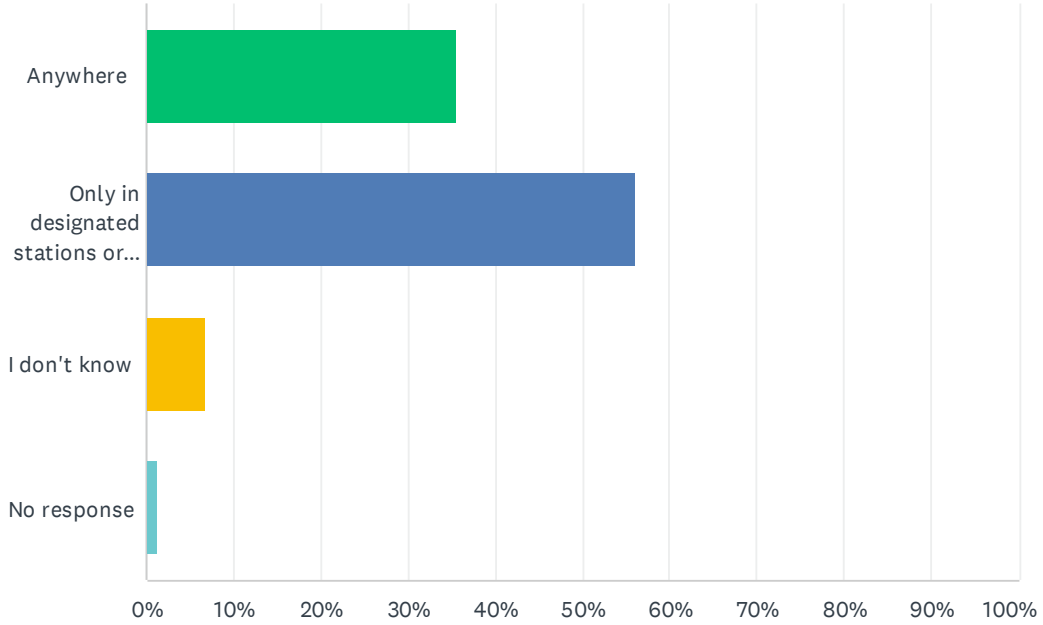

General Perceptions of Micromobility in Kamloops
Pathways in parks
Quiet residential streets (i.e...
Busy multi-lane streets
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Yes
No
I don't know
No response

	YES	NO	I DON'T KNOW	NO RESPONSE	TOTAL
Sidewalks	49.32% 36	39.73% 29	10.96% 8	0.00% 0	73
Bike lanes	79.45% 58	9.59% 7	10.96% 8	0.00% 0	73
Off-street walking and cycling corridors	72.60% 53	19.18% 14	8.22% 6	0.00% 0	73
Pathways in parks	71.43% 50	15.71% 11	12.86% 9	0.00% 0	70
Quiet residential streets (i.e., roads with no marked lanes or centrelines)	83.56% 61	6.85% 5	9.59% 7	0.00% 0	73
Busy multi-lane streets	24.66% 18	61.64% 45	13.70% 10	0.00% 0	73

#	OTHER (PLEASE SPECIFY) - I THINK E-SCOOTERS SHOULD BE ALLOWED TO RIDE ON...	DATE
1	Not in busy places, maybe where they won't impact driving or walking. Maybe a if there was a subsection on the bikelanes.	9/25/2024 9:28 AM
2	These roads are incredibly unsafe due to lack of proper shoulders or bike lanes. On top of that, drivers in Kamloops are aggressive towards bikes and e-bikes making this even more dangerous. Better infrastructure for e-bikes and bikes is crucial.	9/21/2024 7:17 PM

Q12 Do you think e-scooters should be permitted to park anywhere or in designated area only?

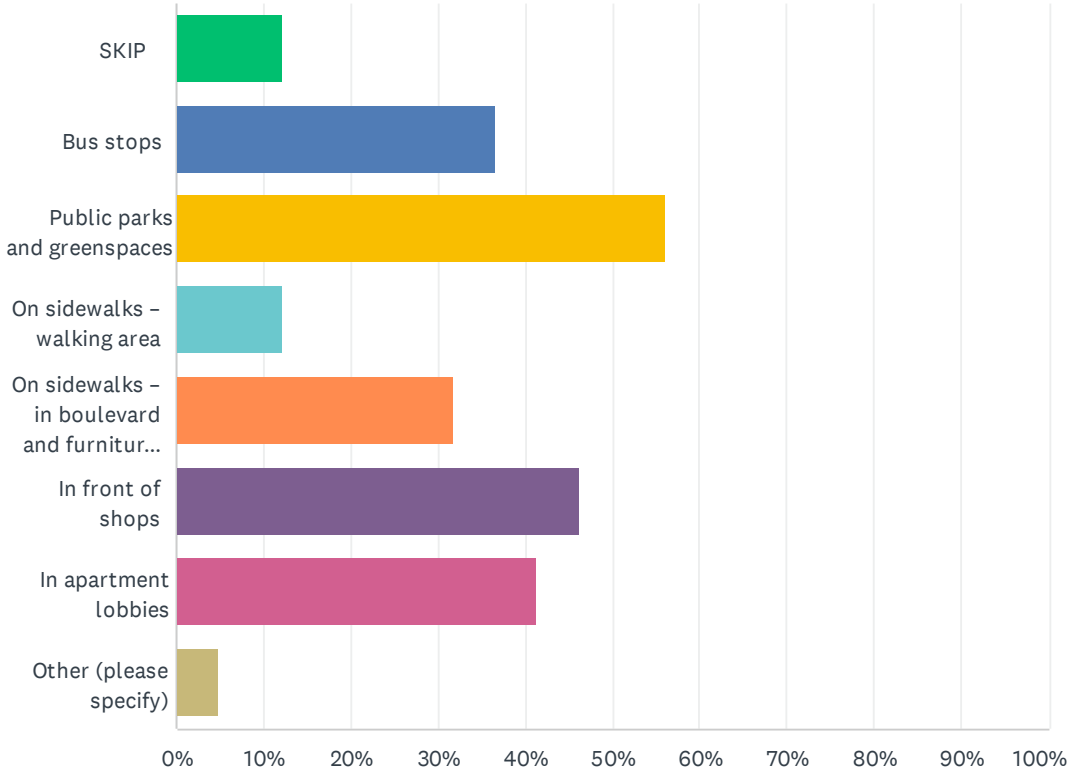
Answered: 73 Skipped: 14



ANSWER CHOICES	RESPONSES	
Anywhere	35.62%	26
Only in designated stations or areas	56.16%	41
I don't know	6.85%	5
No response	1.37%	1
TOTAL		73

Q13 If “in designated areas only”, which of the following areas do you think e-scooters should be permitted to park?

Answered: 41 Skipped: 46

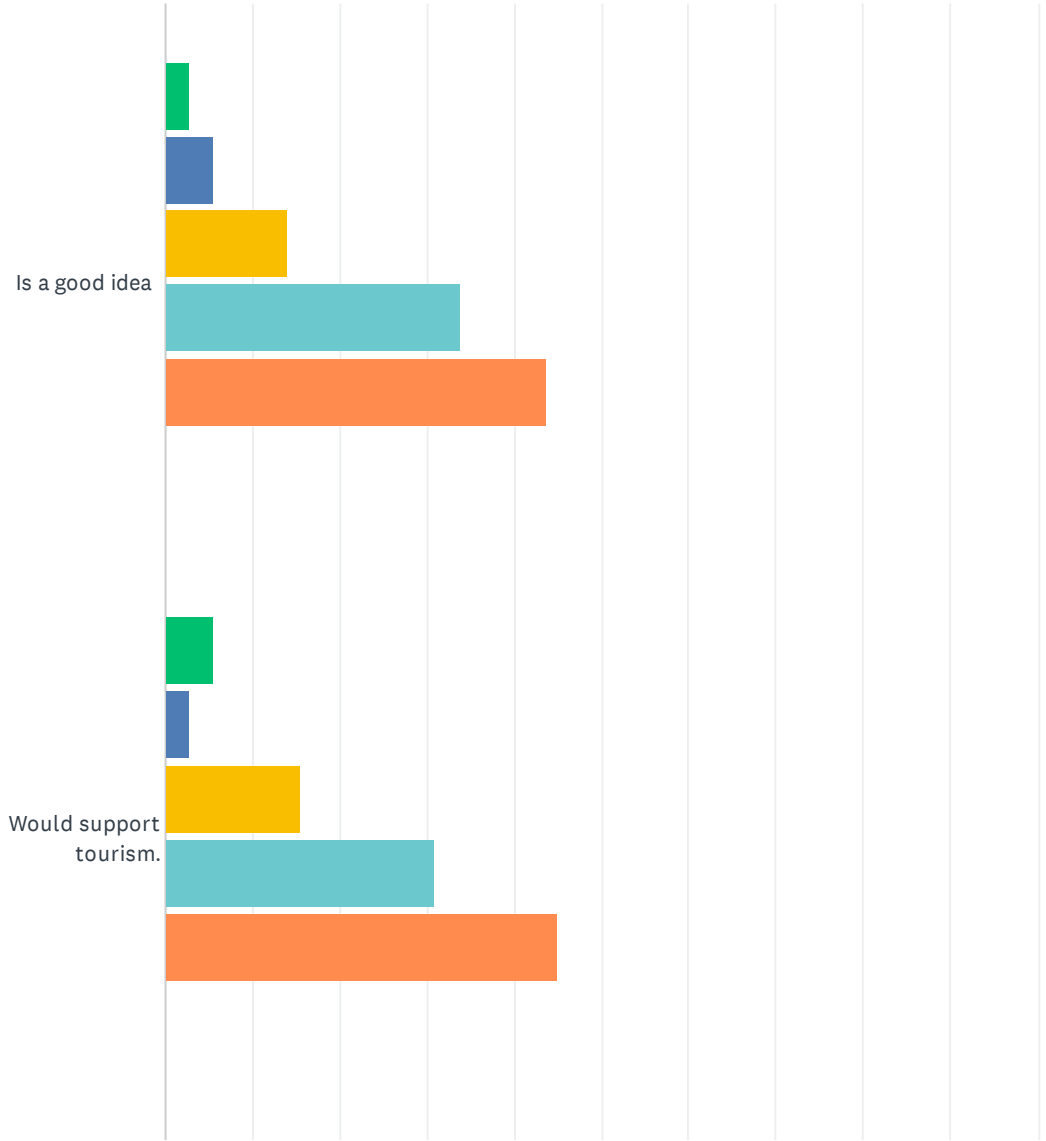


ANSWER CHOICES	RESPONSES	
SKIP	12.20%	5
Bus stops	36.59%	15
Public parks and greenspaces	56.10%	23
On sidewalks – walking area	12.20%	5
On sidewalks – in boulevard and furniture areas	31.71%	13
In front of shops	46.34%	19
In apartment lobbies	41.46%	17
Other (please specify)	4.88%	2
Total Respondents: 41		

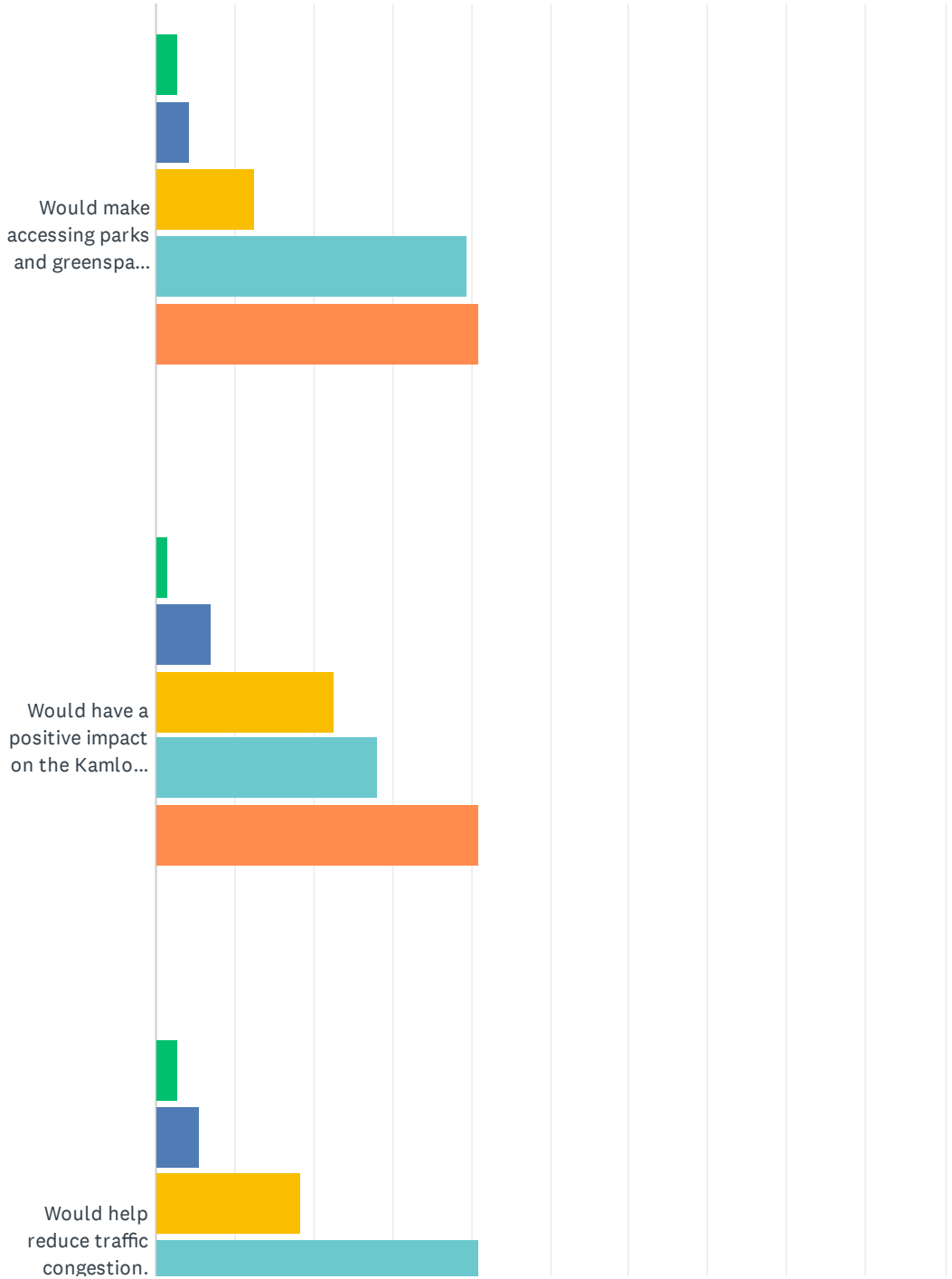
#	OTHER (PLEASE SPECIFY)	DATE
1	O	9/23/2024 5:56 PM
2	Dedicated parking space in parking lots	9/19/2024 9:13 PM

Q14 How strongly do you agree or disagree with the following statements? “I think a shared e-scooter program in my region …

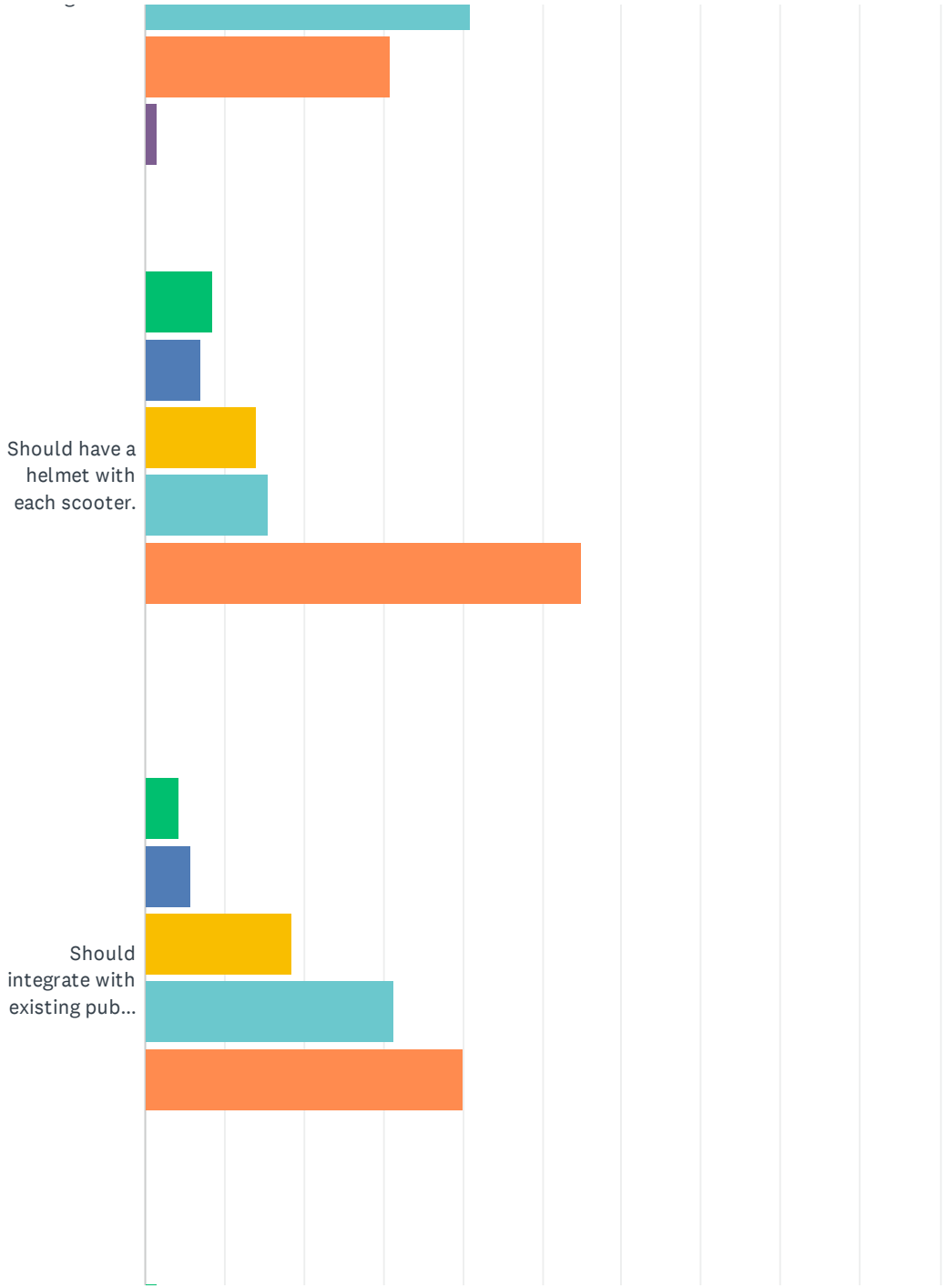
Answered: 71 Skipped: 16

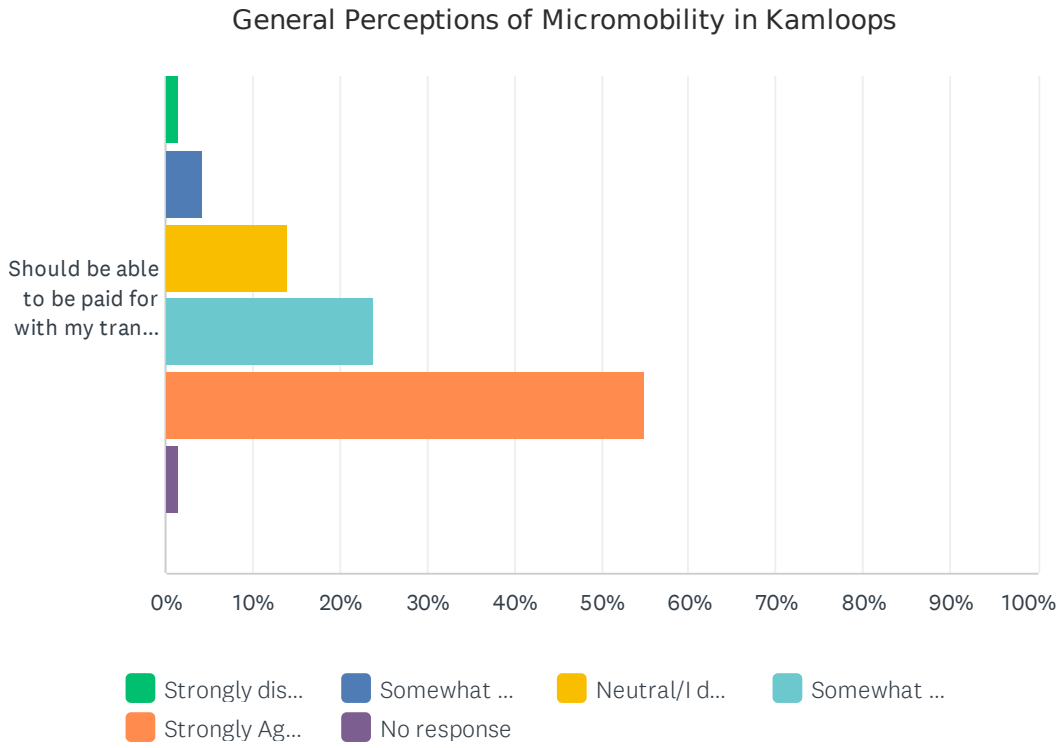


General Perceptions of Micromobility in Kamloops



General Perceptions of Micromobility in Kamloops



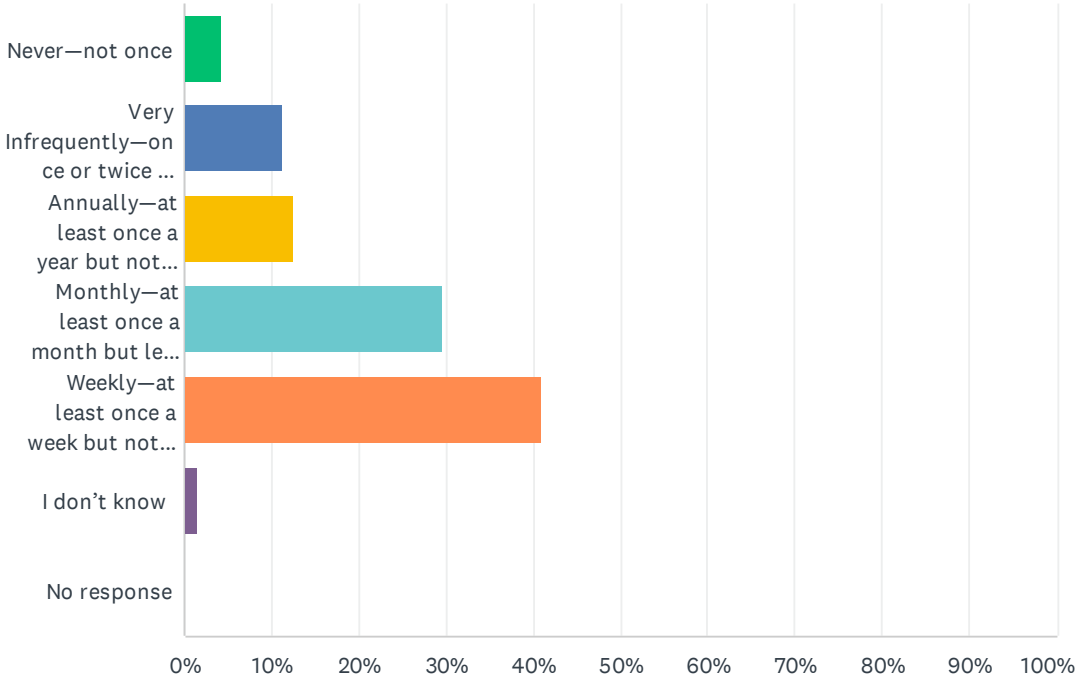

General Perceptions of Micromobility in Kamloops
Should be able to be paid for with my tran...
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Strongly dis...
Somewhat ...
Neutral/I d...
Somewhat ...
Strongly Ag...
No response

General Perceptions of Micromobility in Kamloops

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	NEUTRAL/I DON'T KNOW	SOMEWHAT AGREE	STRONGLY AGREE	NO RESPONSE	TOTAL
Is a good idea	2.82% 2	5.63% 4	14.08% 10	33.80% 24	43.66% 31	0.00% 0	71
Would support tourism.	5.63% 4	2.82% 2	15.49% 11	30.99% 22	45.07% 32	0.00% 0	71
Would make accessing parks and greenspace easier	2.82% 2	4.23% 3	12.68% 9	39.44% 28	40.85% 29	0.00% 0	71
Would have a positive impact on the Kamloops image and reputation.	1.41% 1	7.04% 5	22.54% 16	28.17% 20	40.85% 29	0.00% 0	71
Would help reduce traffic congestion.	2.82% 2	5.63% 4	18.31% 13	40.85% 29	30.99% 22	1.41% 1	71
Should have a helmet with each scooter.	8.45% 6	7.04% 5	14.08% 10	15.49% 11	54.93% 39	0.00% 0	71
Should integrate with existing public transit (e.g. available at transit stations).	4.29% 3	5.71% 4	18.57% 13	31.43% 22	40.00% 28	0.00% 0	70
Should be able to be paid for with my transit pass or similar universal service	1.41% 1	4.23% 3	14.08% 10	23.94% 17	54.93% 39	1.41% 1	71

Q15 If a shared e-scooter program was made available in your area, how often do you think you would typically use it?

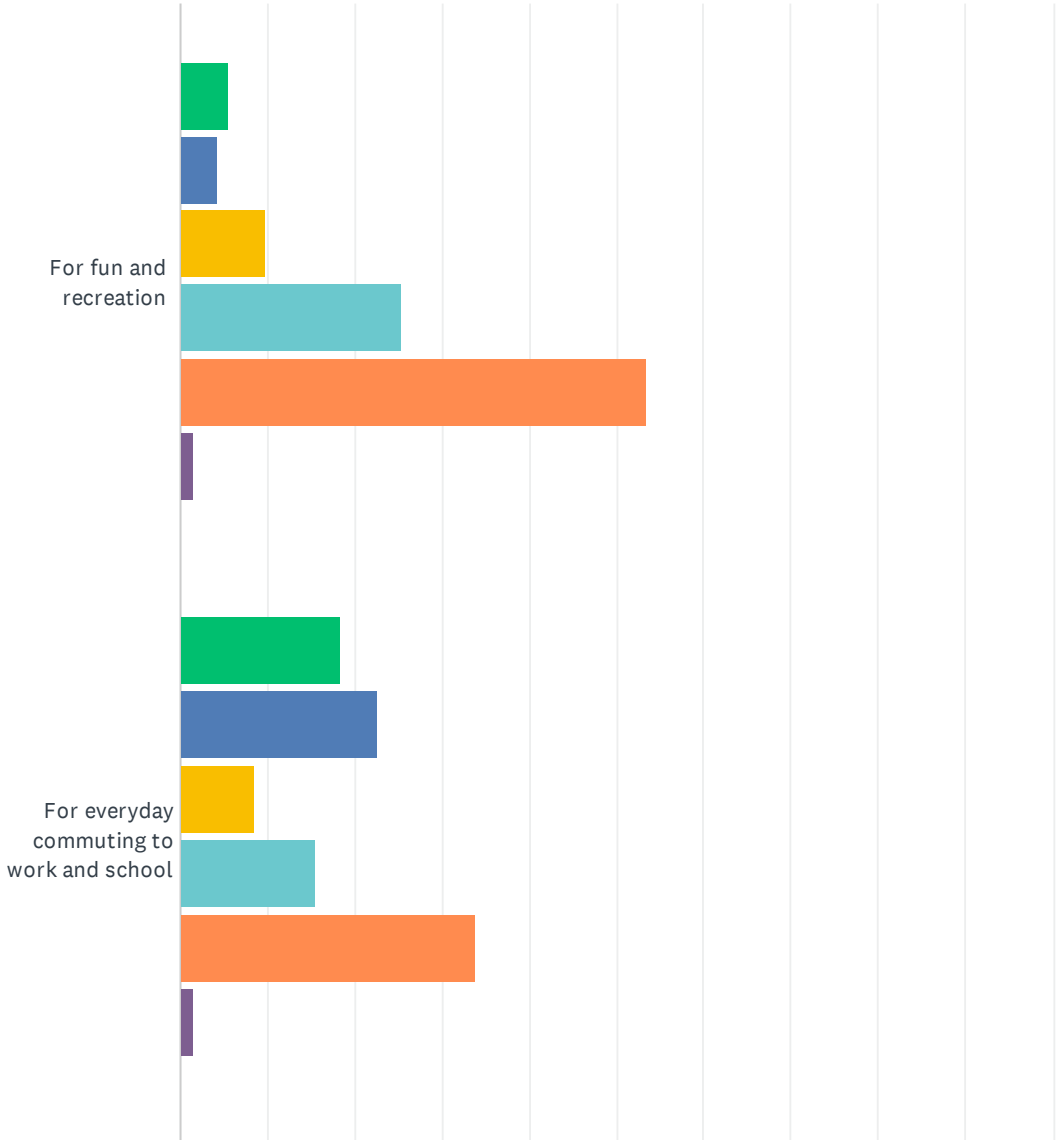
Answered: 71 Skipped: 16



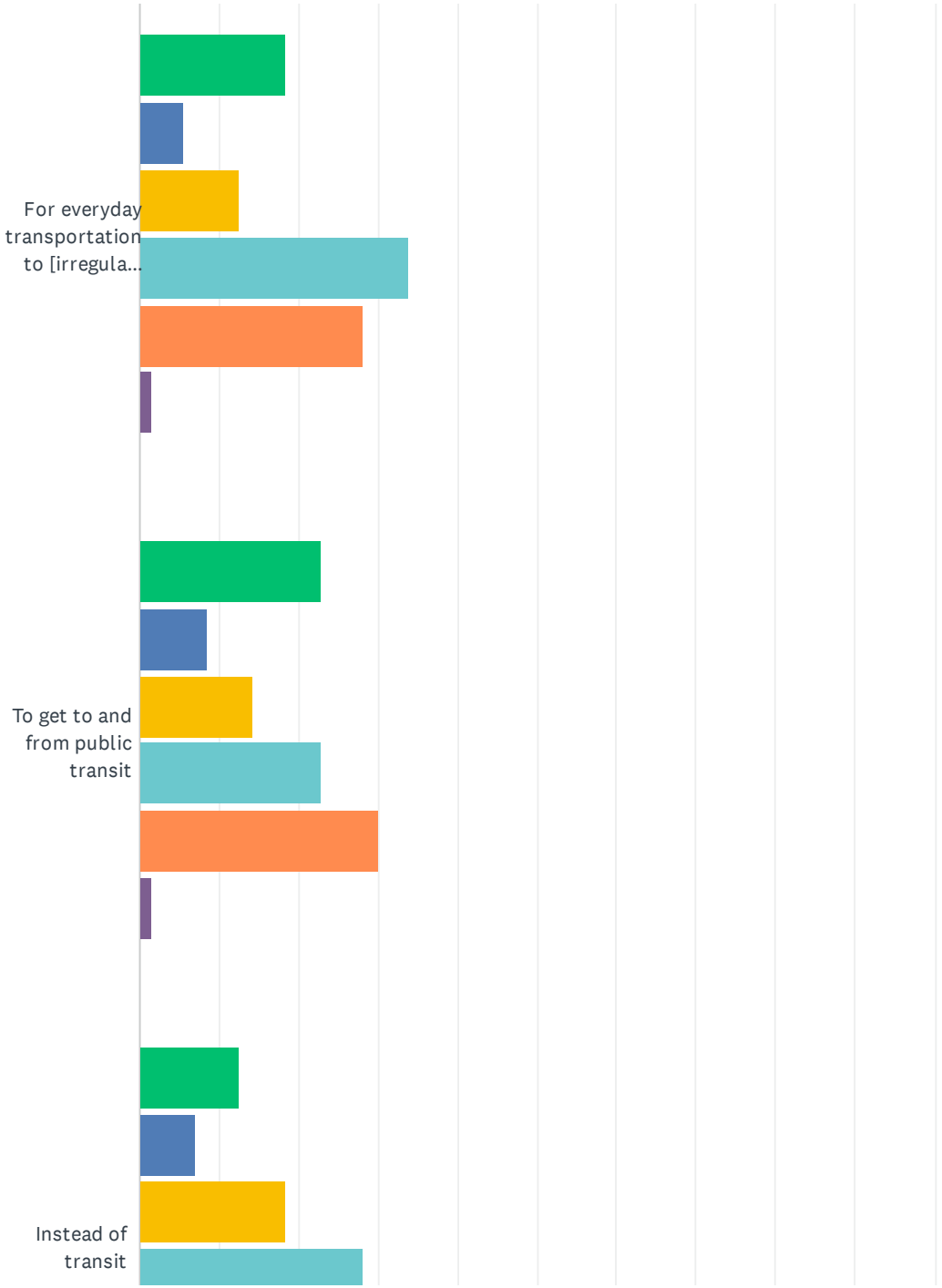
ANSWER CHOICES	RESPONSES	
Never—not once	4.23%	3
Very Infrequently—once or twice in the next few years	11.27%	8
Annually—at least once a year but not monthly	12.68%	9
Monthly—at least once a month but less than once a week	29.58%	21
Weekly—at least once a week but not daily	40.85%	29
I don’t know	1.41%	1
No response	0.00%	0
TOTAL		71

Q16 If a shared e-scooter program was made available in your area, how likely or unlikely are you to use it in the following ways:

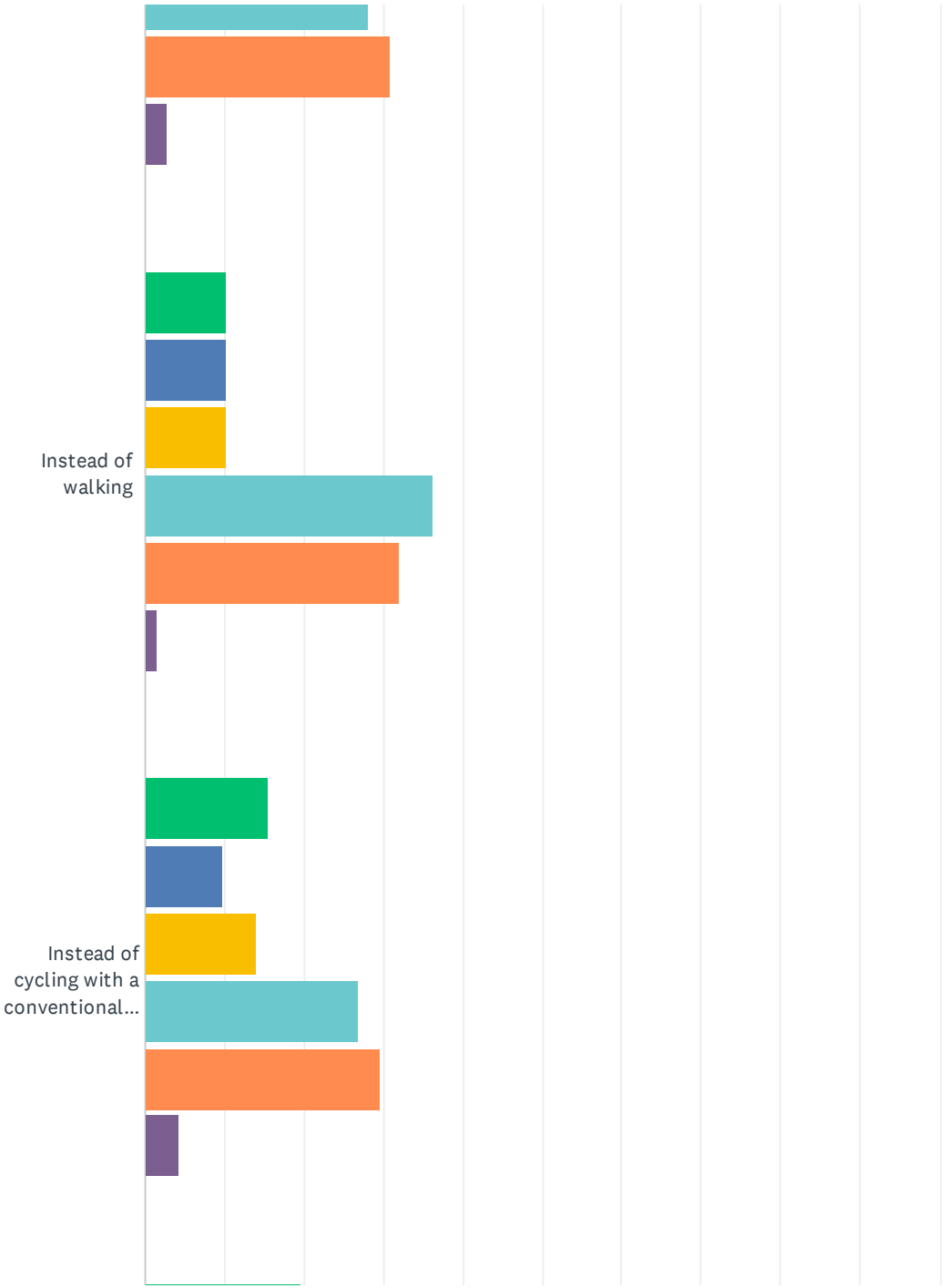
Answered: 71 Skipped: 16



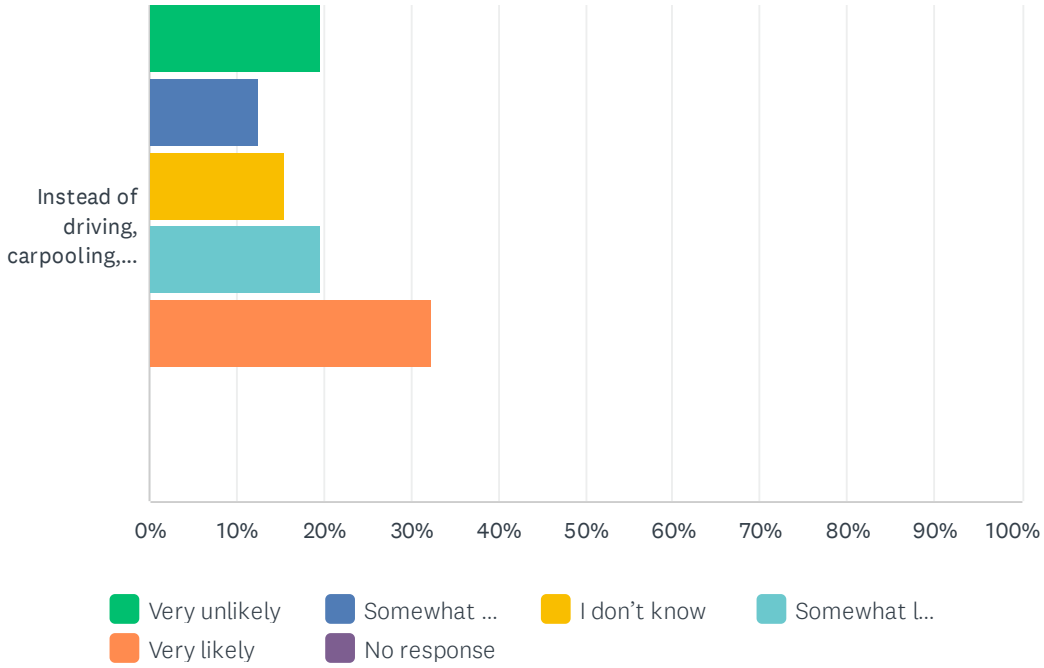
General Perceptions of Micromobility in Kamloops



General Perceptions of Micromobility in Kamloops



General Perceptions of Micromobility in Kamloops



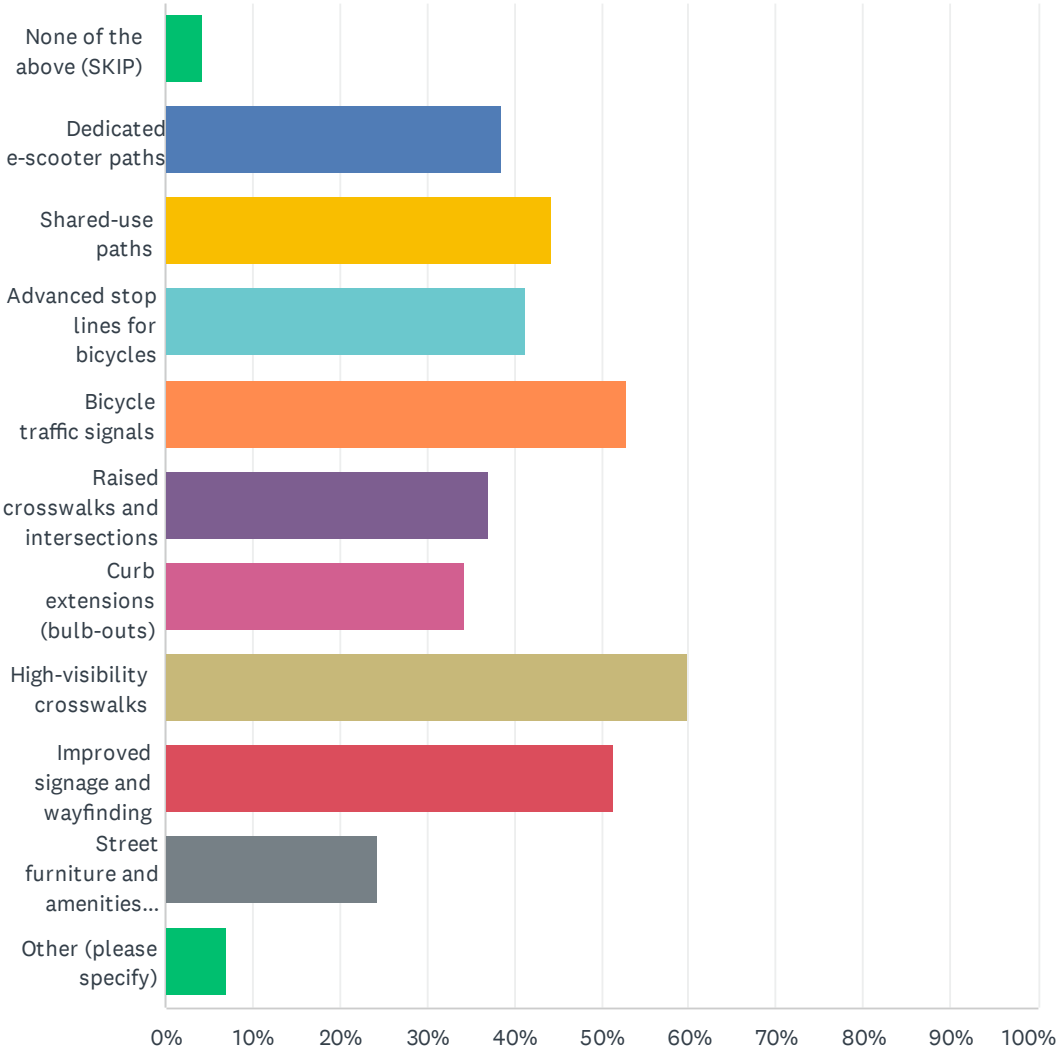
General Perceptions of Micromobility in Kamloops

	VERY UNLIKELY	SOMEWHAT UNLIKELY	I DON'T KNOW	SOMEWHAT LIKELY	VERY LIKELY	NO RESPONSE	TOTAL
For fun and recreation	5.63% 4	4.23% 3	9.86% 7	25.35% 18	53.52% 38	1.41% 1	71
For everyday commuting to work and school	18.31% 13	22.54% 16	8.45% 6	15.49% 11	33.80% 24	1.41% 1	71
For everyday transportation to [irregular] appointments, errands, shopping, etc.	18.31% 13	5.63% 4	12.68% 9	33.80% 24	28.17% 20	1.41% 1	71
To get to and from public transit	22.86% 16	8.57% 6	14.29% 10	22.86% 16	30.00% 21	1.43% 1	70
Instead of transit	12.68% 9	7.04% 5	18.31% 13	28.17% 20	30.99% 22	2.82% 2	71
Instead of walking	10.14% 7	10.14% 7	10.14% 7	36.23% 25	31.88% 22	1.45% 1	69
Instead of cycling with a conventional or electric bicycle	15.49% 11	9.86% 7	14.08% 10	26.76% 19	29.58% 21	4.23% 3	71
Instead of driving, carpooling, carsharing or taking a taxi	19.72% 14	12.68% 9	15.49% 11	19.72% 14	32.39% 23	0.00% 0	71

Q17 What types of traffic control devices do you think are most beneficial for promoting micromobility and active transportation in Kamloops? (Select all that apply)

Answered: 70 Skipped: 17

General Perceptions of Micromobility in Kamloops

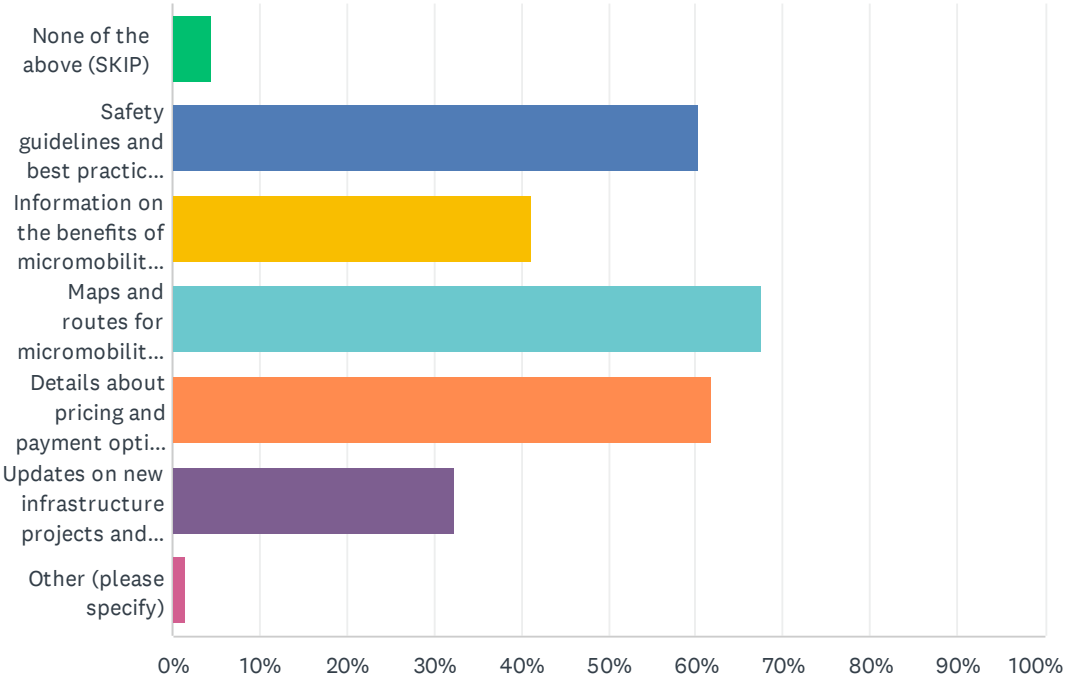


ANSWER CHOICES	RESPONSES	
None of the above (SKIP)	4.29%	3
Dedicated e-scooter paths	38.57%	27
Shared-use paths	44.29%	31
Advanced stop lines for bicycles	41.43%	29
Bicycle traffic signals	52.86%	37
Raised crosswalks and intersections	37.14%	26
Curb extensions (bulb-outs)	34.29%	24
High-visibility crosswalks	60.00%	42
Improved signage and wayfinding	51.43%	36
Street furniture and amenities (e.g., benches, water fountains)	24.29%	17
Other (please specify)	7.14%	5
Total Respondents: 70		

#	OTHER (PLEASE SPECIFY)	DATE
1	Designated parking/e-mobility lanes	9/26/2024 11:40 AM
2	Protected bike lanes on busier streets (like with some kind of barrier separating bike lanes from the road). More bike lanes so cyclist and people on scooters etc don’t have to use pedestrian sidewalks. More sidewalks and maintain them better.	9/23/2024 12:48 PM
3	Clearly painted shoulder lines on major roads. Small step but would help greatly to let drivers know where the should be, and protect commuting cyclists	9/21/2024 7:31 PM
4	Bike/micro transit lanes	9/21/2024 6:08 PM
5	Same rules as now	9/19/2024 10:29 AM

Q18 What information would help you feel more confident using micromobility options? (Select all that apply)

Answered: 68 Skipped: 19

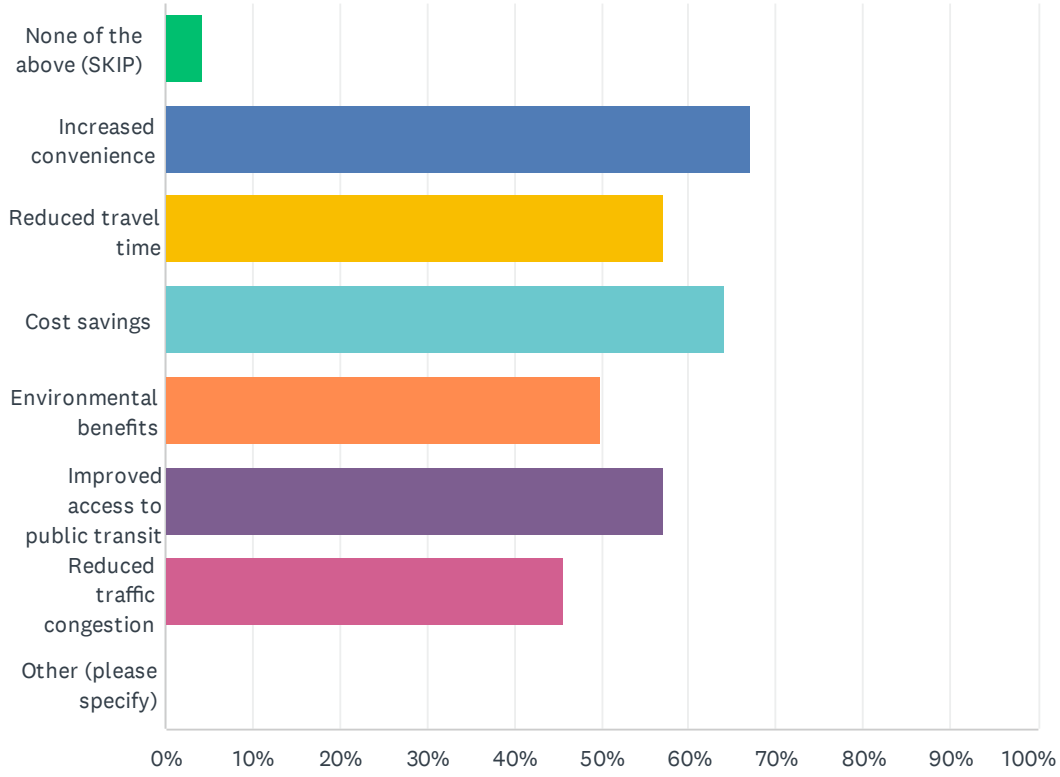


ANSWER CHOICES	RESPONSES	
None of the above (SKIP)	4.41%	3
Safety guidelines and best practices for riding e-bikes and e-scooters	60.29%	41
Information on the benefits of micromobility for health and the environment	41.18%	28
Maps and routes for micromobility-friendly paths	67.65%	46
Details about pricing and payment options for micromobility services	61.76%	42
Updates on new infrastructure projects and improvements	32.35%	22
Other (please specify)	1.47%	1
Total Respondents: 68		

#	OTHER (PLEASE SPECIFY)	DATE
1	Especially for accident prone areas- Special care to be taken	9/19/2024 4:12 PM

Q19 What benefits do you see in integrating micromobility with public transit? (Select all that apply)

Answered: 70 Skipped: 17

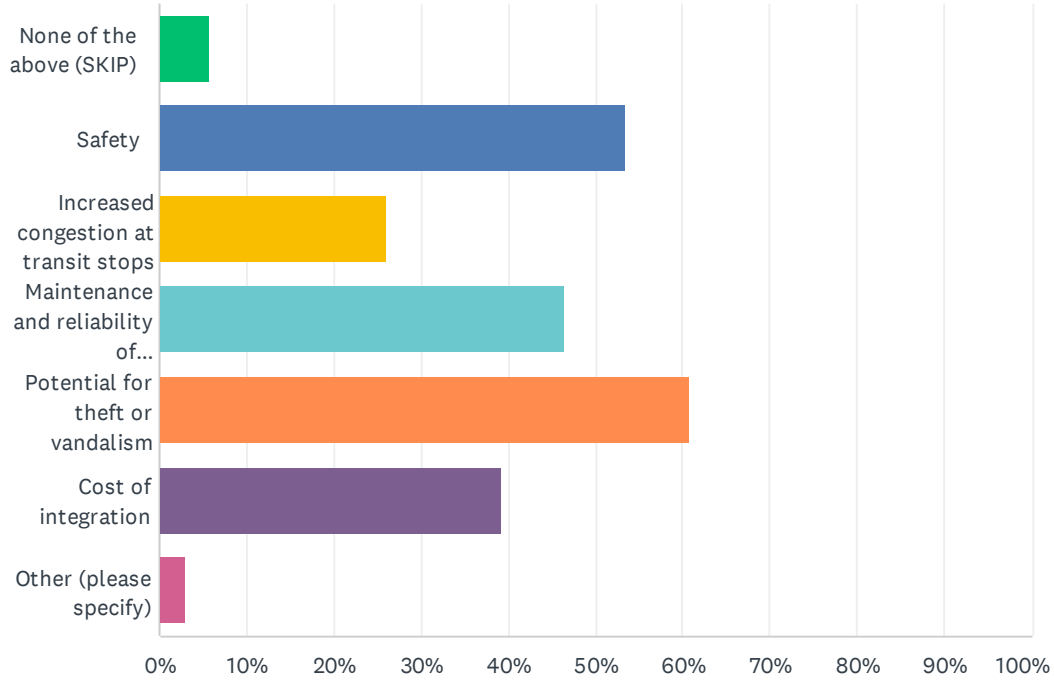


ANSWER CHOICES	RESPONSES	
None of the above (SKIP)	4.29%	3
Increased convenience	67.14%	47
Reduced travel time	57.14%	40
Cost savings	64.29%	45
Environmental benefits	50.00%	35
Improved access to public transit	57.14%	40
Reduced traffic congestion	45.71%	32
Other (please specify)	0.00%	0
Total Respondents: 70		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q20 What concerns do you have about integrating micromobility with public transit? (Select all that apply)

Answered: 69 Skipped: 18



ANSWER CHOICES	RESPONSES	
None of the above (SKIP)	5.80%	4
Safety	53.62%	37
Increased congestion at transit stops	26.09%	18
Maintenance and reliability of micromobility vehicles	46.38%	32
Potential for theft or vandalism	60.87%	42
Cost of integration	39.13%	27
Other (please specify)	2.90%	2
Total Respondents: 69		

#	OTHER (PLEASE SPECIFY)	DATE
1	Safety aspects, some people are quite irresponsible with their usage, putting pedastrains in harms way.	9/25/2024 9:32 AM
2	I worry about pedestrian safety, without designated spaces on roads for micro mobility like bikes and electric scooters they often take up pedestrian areas making it harder for pedestrians. More enforcement of road rules, I notice a lot of bikes tend to not follow road rules as strictly (eg. running red lights, not coming to full stops at stop signs, etc) I worry other micro mobility options will act like this as well.	9/23/2024 12:48 PM

Q21 Do you have any additional comments or suggestions regarding micromobility adoption in Kamloops?

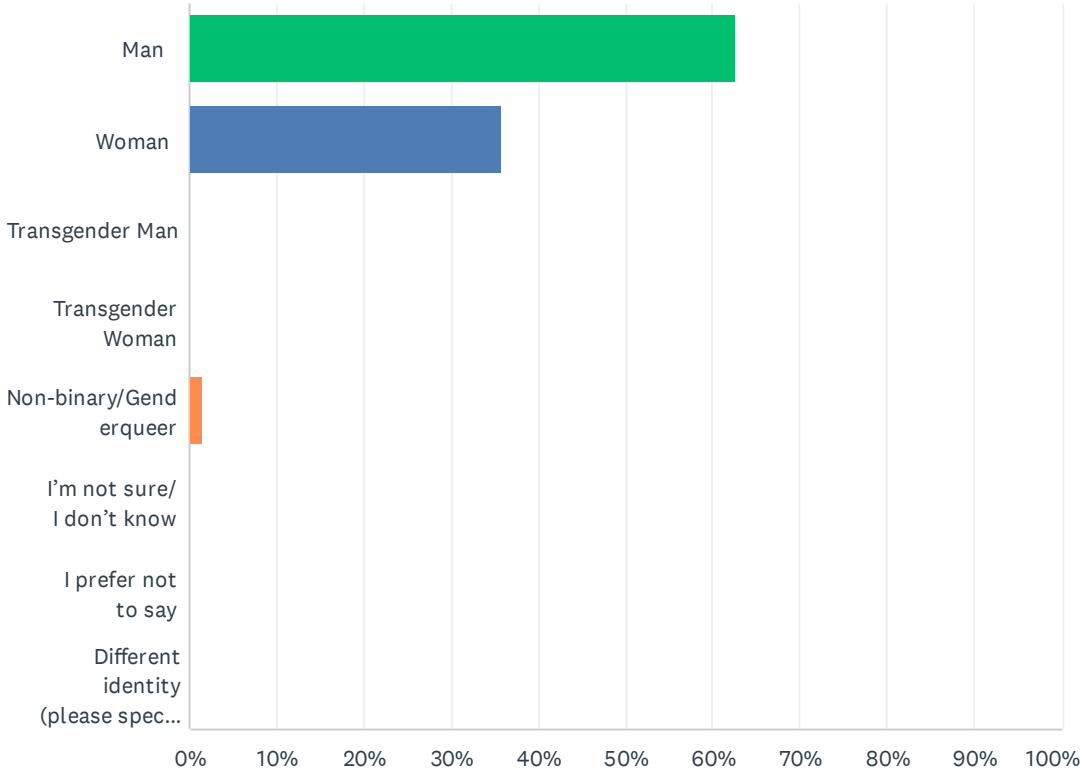
Answered: 21 Skipped: 66

#	RESPONSES	DATE
1	Kamloops is a fantastic market for an e-scooter share program/app based off the topography. I think like most areas that use these services, there will be initial growing pains/annoyance/vandalism from the general public - but overall it will still be a good thing. Having more people use the (lack) of safe cycle infrastructure in Kamloops while initially scary will hopefully push for more infrastructure to be developed!	9/26/2024 3:54 PM
2	Juat make everything inexpensive please.	9/25/2024 3:33 PM
3	I think micro mobility is a good option but only if it can be done safely.	9/23/2024 12:48 PM
4	This town has a vibrant community of cyclists, along with a large community of university students that walk and bike to school. There needs to be much more investment and planning around pedestrian infrastructure (cycling, e-bike, walking, etc). It is frankly dangerous at present, and the existing infrastructure is nonsensical and needs improvement (e.g. bike lanes appear out of nowhere then disappear, walking paths shoot you out onto shoulder-less, busy roads, pedestrian and cycling routes don't connect, etc.).	9/21/2024 7:31 PM
5	Bike lanes!! A bike/scooter feels too fast for the sidewalk and too slow and exposed for the road. This type of transit needs space!	9/21/2024 6:08 PM
6	No	9/19/2024 9:16 PM
7	NA	9/19/2024 4:42 PM
8	There should be some benefit for students, as they will help to promote this micro mobility more	9/19/2024 4:26 PM
9	It will be exciting to see such a development in this space with Kamloops being a student's town to help commute longer distance areas for students with low availability of bus and transit facility at night. Tracking system on these shared devices will be a game changer in this space here.	9/19/2024 4:20 PM
10	no	9/19/2024 4:18 PM
11	No	9/19/2024 4:17 PM
12	Must keep people safe and remove any threat of vandalism and theft.	9/19/2024 4:17 PM
13	No	9/19/2024 4:14 PM
14	No	9/19/2024 4:14 PM
15	No	9/19/2024 4:13 PM

16	No	9/19/2024 4:13 PM
17	Should have a safe parking spot	9/19/2024 4:13 PM
18	This is something that will allow additional transportation option for students along with the bus system.	9/19/2024 1:48 PM
19	I love to have this service in Kamloops	9/18/2024 2:49 PM
20	Just make it cheaper and convenient for students	9/18/2024 2:41 PM
21	E-bikes would preform a lot better then a scooter	9/18/2024 10:04 AM

Q22 What is your gender?

Answered: 67 Skipped: 20

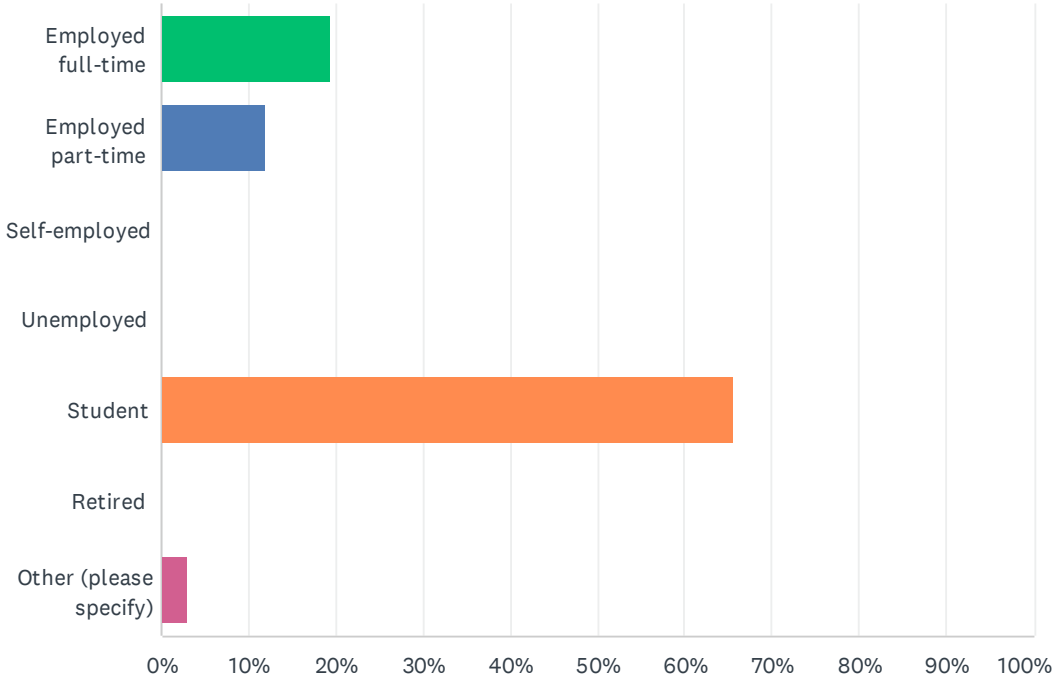


ANSWER CHOICES	RESPONSES	
Man	62.69%	42
Woman	35.82%	24
Transgender Man	0.00%	0
Transgender Woman	0.00%	0
Non-binary/Genderqueer	1.49%	1
I’m not sure/ I don’t know	0.00%	0
I prefer not to say	0.00%	0
Different identity (please specify if desired)	0.00%	0
TOTAL		67

#	DIFFERENT IDENTITY (PLEASE SPECIFY IF DESIRED)	DATE
	There are no responses.	

Q23 What is your employment status?

Answered: 67 Skipped: 20

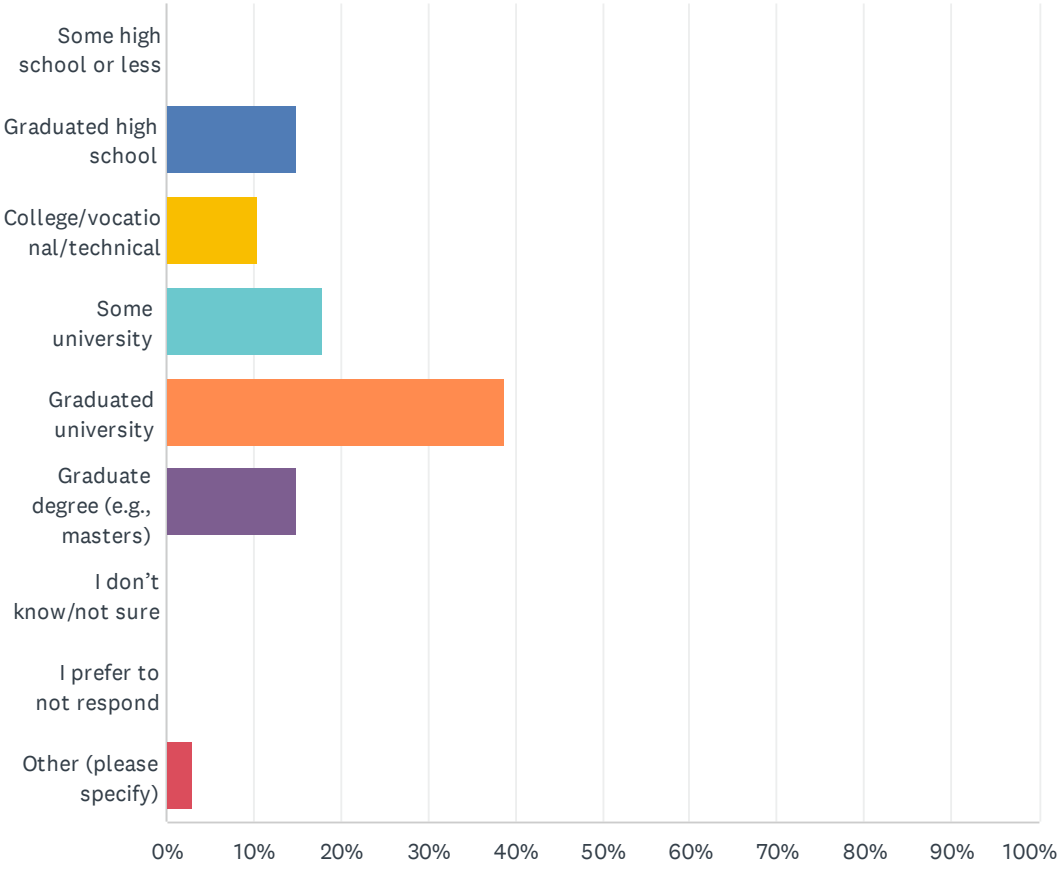


ANSWER CHOICES	RESPONSES	
Employed full-time	19.40%	13
Employed part-time	11.94%	8
Self-employed	0.00%	0
Unemployed	0.00%	0
Student	65.67%	44
Retired	0.00%	0
Other (please specify)	2.99%	2
TOTAL		67

#	OTHER (PLEASE SPECIFY)	DATE
1	student and part-time employee	9/19/2024 4:19 PM
2	Student and part time work	9/13/2024 11:32 AM

Q24 What is the highest level of education you have completed? [Select one]

Answered: 67 Skipped: 20



ANSWER CHOICES	RESPONSES	
Some high school or less	0.00%	0
Graduated high school	14.93%	10
College/vocational/technical	10.45%	7
Some university	17.91%	12
Graduated university	38.81%	26
Graduate degree (e.g., masters)	14.93%	10
I don’t know/not sure	0.00%	0
I prefer to not respond	0.00%	0
Other (please specify)	2.99%	2
TOTAL		67

#	OTHER (PLEASE SPECIFY)	DATE
1	fourth-year university student	9/19/2024 4:19 PM
2	Bachelors from college	9/19/2024 4:14 PM

Q25 What are the first 3 digits of your home postal code? [Please enter in the format - ?#? (e.g., V2B)][Enter UNK is unknown]

Answered: 67 Skipped: 20

#	RESPONSES	DATE
1	V0E	9/27/2024 12:46 AM
2	V2E	9/26/2024 3:56 PM
3	V2B	9/26/2024 12:20 PM
4	V2C	9/26/2024 11:41 AM
5	V2C	9/26/2024 9:43 AM
6	V2B	9/25/2024 3:35 PM
7	V2e	9/25/2024 9:34 AM
8	V2C	9/24/2024 5:10 PM
9	V2C	9/23/2024 5:58 PM
10	V2C	9/23/2024 12:49 PM
11	V2T	9/23/2024 10:00 AM
12	V2C	9/22/2024 12:20 AM
13	V2b	9/21/2024 8:54 PM
14	V2b	9/21/2024 8:51 PM
15	V2C	9/21/2024 7:33 PM
16	V2C	9/21/2024 6:09 PM
17	V2c	9/20/2024 7:15 PM
18	V2C	9/19/2024 11:31 PM
19	V2C	9/19/2024 9:20 PM
20	V2B	9/19/2024 8:04 PM
21	V2B	9/19/2024 6:39 PM

22	V2B	9/19/2024 5:23 PM
23	V2E	9/19/2024 4:44 PM
24	0B6	9/19/2024 4:28 PM
25	V2C	9/19/2024 4:24 PM
26	V2E	9/19/2024 4:22 PM
27	V2C	9/19/2024 4:22 PM
28	V2C	9/19/2024 4:21 PM
29	V2E	9/19/2024 4:20 PM
30	V2E	9/19/2024 4:20 PM
31	V2c	9/19/2024 4:19 PM
32	V2C	9/19/2024 4:19 PM
33	V2C	9/19/2024 4:19 PM
34	V2C	9/19/2024 4:18 PM
35	V2C	9/19/2024 4:17 PM
36	V2E	9/19/2024 4:16 PM
37	V2C	9/19/2024 4:16 PM
38	V1S	9/19/2024 4:16 PM
39	V2E	9/19/2024 4:15 PM
40	V2C	9/19/2024 4:15 PM
41	v2c	9/19/2024 4:15 PM
42	V2C	9/19/2024 4:14 PM
43	V2B	9/19/2024 4:14 PM
44	V2B	9/19/2024 4:13 PM
45	V1S	9/19/2024 4:12 PM
46	V2E	9/19/2024 4:12 PM
47	V3C	9/19/2024 4:12 PM
48	UNK	9/19/2024 4:12 PM
49	V2C	9/19/2024 1:50 PM

50	V2C	9/19/2024 10:41 AM
51	V2B	9/19/2024 10:31 AM
52	v2b	9/18/2024 3:26 PM
53	V2C	9/18/2024 2:51 PM
54	V2c	9/18/2024 2:43 PM
55	V2b	9/18/2024 10:54 AM
56	V2B	9/18/2024 10:10 AM
57	V2B	9/18/2024 10:08 AM
58	V1S	9/18/2024 10:06 AM
59	V2B	9/18/2024 10:03 AM
60	V2C	9/17/2024 6:10 PM
61	V2E	9/17/2024 6:01 PM
62	V2C	9/16/2024 9:27 AM
63	V2c	9/16/2024 6:56 AM
64	V2E	9/15/2024 9:07 PM
65	V2B	9/15/2024 5:10 PM
66	v2c	9/15/2024 10:27 AM
67	V2B	9/13/2024 11:32 AM

Q26 What are the first 3 digits of your primary work, school or volunteer location's postal code? [Please enter in the format - ?#? (e.g., V2B)][Enter UNK is unknown]

Answered: 67 Skipped: 20

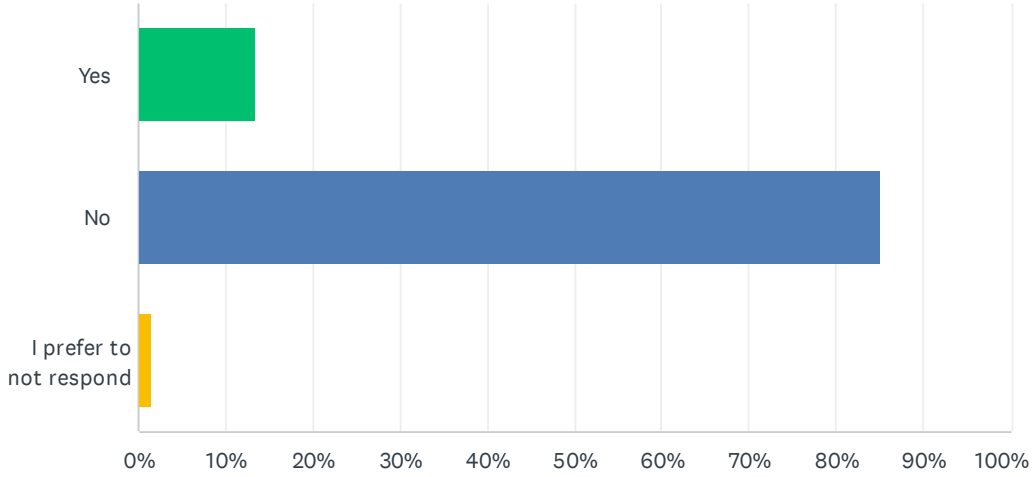
#	RESPONSES	DATE
1	V2C	9/27/2024 12:46 AM
2	V2C	9/26/2024 3:56 PM
3	Unk	9/26/2024 12:20 PM
4	UNK	9/26/2024 11:41 AM
5	V2C	9/26/2024 9:43 AM
6	V2C	9/25/2024 3:35 PM
7	UNK	9/25/2024 9:34 AM
8	UNK	9/24/2024 5:10 PM
9	UNK	9/23/2024 5:58 PM
10	V2C	9/23/2024 12:49 PM
11	V2C	9/23/2024 10:00 AM
12	V2C	9/22/2024 12:20 AM
13	V2c	9/21/2024 8:54 PM
14	V2b	9/21/2024 8:51 PM
15	UNK	9/21/2024 7:33 PM
16	V2C	9/21/2024 6:09 PM
17	V2c	9/20/2024 7:15 PM
18	V2C	9/19/2024 11:31 PM
19	V2C	9/19/2024 9:20 PM
20	V2B	9/19/2024 8:04 PM
21	UNK	9/19/2024 6:39 PM

22	V2B	9/19/2024 5:23 PM
23	V2B	9/19/2024 4:44 PM
24	6T6	9/19/2024 4:28 PM
25	V2E	9/19/2024 4:24 PM
26	V2B	9/19/2024 4:22 PM
27	V2C	9/19/2024 4:22 PM
28	V2B	9/19/2024 4:21 PM
29	VEC	9/19/2024 4:20 PM
30	V2C	9/19/2024 4:20 PM
31	V2c	9/19/2024 4:19 PM
32	UNK	9/19/2024 4:19 PM
33	UNK	9/19/2024 4:19 PM
34	V2C	9/19/2024 4:18 PM
35	V2C	9/19/2024 4:17 PM
36	V2E	9/19/2024 4:16 PM
37	V2C	9/19/2024 4:16 PM
38	V1S	9/19/2024 4:16 PM
39	UNK	9/19/2024 4:15 PM
40	V2C	9/19/2024 4:15 PM
41	v2c	9/19/2024 4:15 PM
42	V2C	9/19/2024 4:14 PM
43	V2B	9/19/2024 4:14 PM
44	V2B	9/19/2024 4:13 PM
45	V2C	9/19/2024 4:12 PM
46	UNK	9/19/2024 4:12 PM
47	V3C	9/19/2024 4:12 PM
48	UNK	9/19/2024 4:12 PM
49	V2C	9/19/2024 1:50 PM

50	V2B	9/19/2024 10:41 AM
51	V2B	9/19/2024 10:31 AM
52	v2b	9/18/2024 3:26 PM
53	V2C	9/18/2024 2:51 PM
54	V2b	9/18/2024 2:43 PM
55	V2c	9/18/2024 10:54 AM
56	V2B	9/18/2024 10:10 AM
57	V2C	9/18/2024 10:08 AM
58	Unk	9/18/2024 10:06 AM
59	V2B	9/18/2024 10:03 AM
60	V2c	9/17/2024 6:10 PM
61	V2C	9/17/2024 6:01 PM
62	V2C	9/16/2024 9:27 AM
63	V2c	9/16/2024 6:56 AM
64	Unk	9/15/2024 9:07 PM
65	V2B	9/15/2024 5:10 PM
66	v2c	9/15/2024 10:27 AM
67	UNK	9/13/2024 11:32 AM

Q27 Are there children (16 years old or younger) in your household?

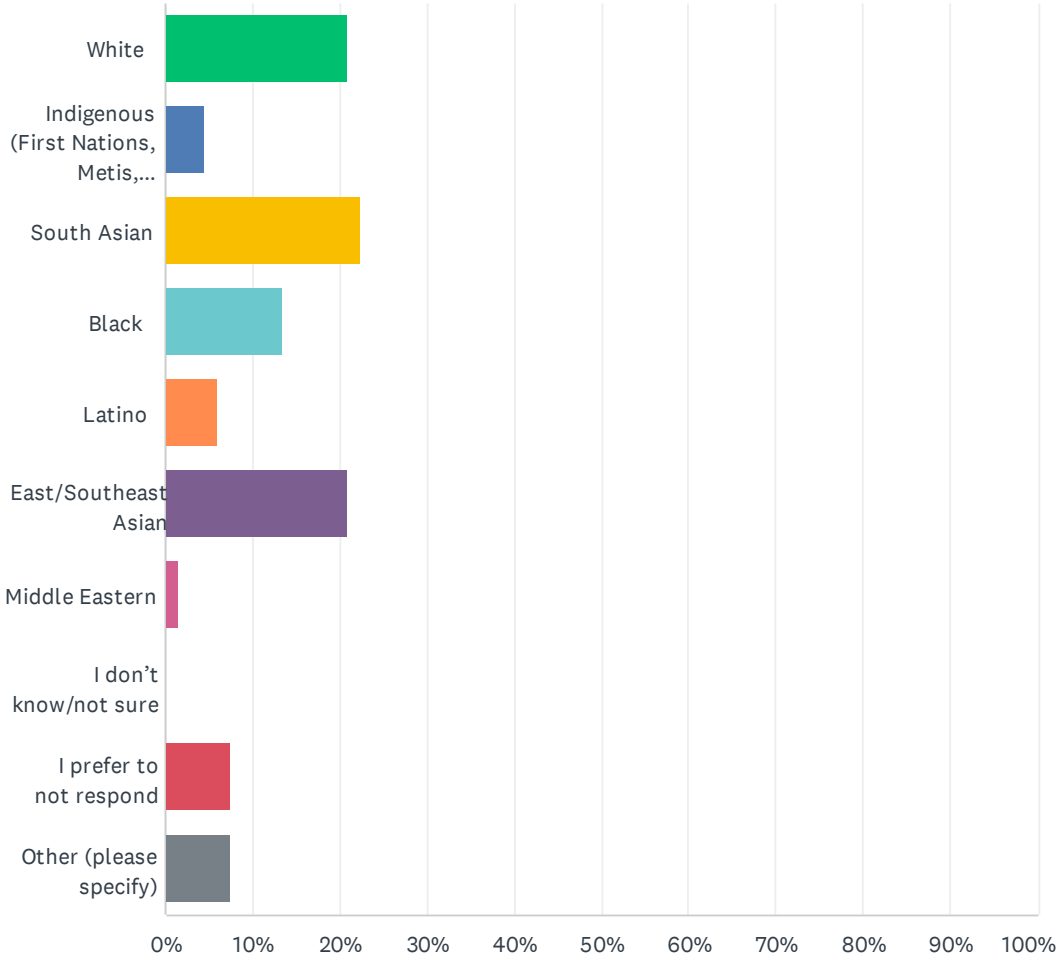
Answered: 67 Skipped: 20



ANSWER CHOICES	RESPONSES	
Yes	13.43%	9
No	85.07%	57
I prefer to not respond	1.49%	1
TOTAL		67

Q28 How would you describe your ethnic background? [select all that apply]

Answered: 67 Skipped: 20

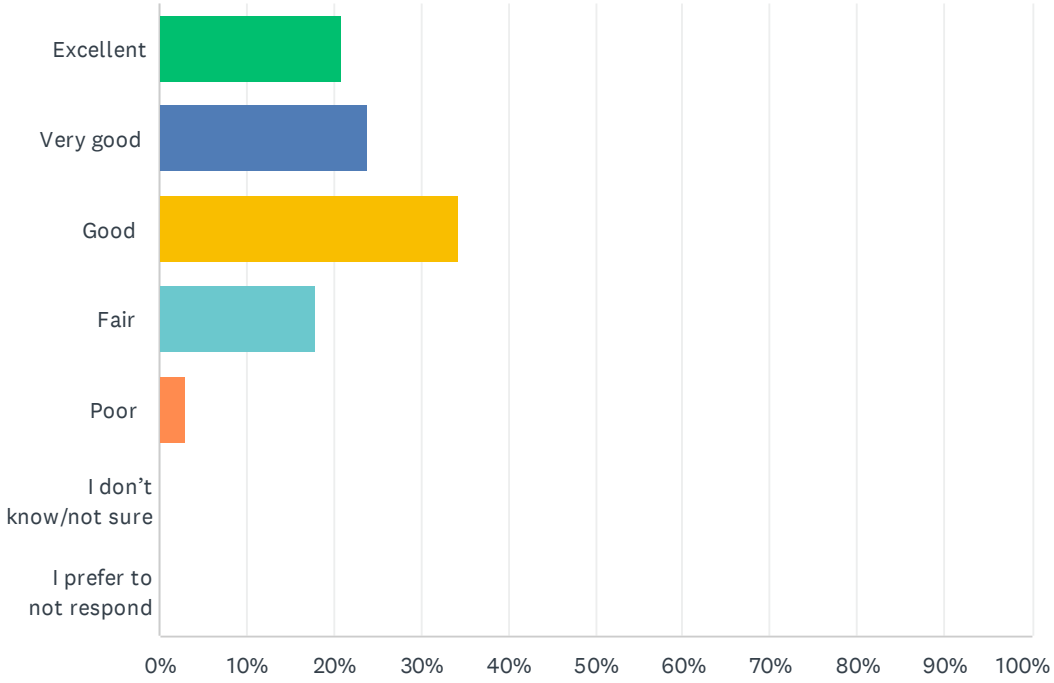


ANSWER CHOICES	RESPONSES	
White	20.90%	14
Indigenous (First Nations, Metis, Inuk/Inuit)	4.48%	3
South Asian	22.39%	15
Black	13.43%	9
Latino	5.97%	4
East/Southeast Asian	20.90%	14
Middle Eastern	1.49%	1
I don’t know/not sure	0.00%	0
I prefer to not respond	7.46%	5
Other (please specify)	7.46%	5
Total Respondents: 67		

#	OTHER (PLEASE SPECIFY)	DATE
1	African	9/22/2024 12:20 AM
2	African	9/19/2024 9:20 PM
3	Central Asia	9/19/2024 4:20 PM
4	Eastern European	9/19/2024 4:19 PM
5	Human	9/19/2024 10:31 AM

Q29 In general, for someone your age, would you say that your health is? [Select one]

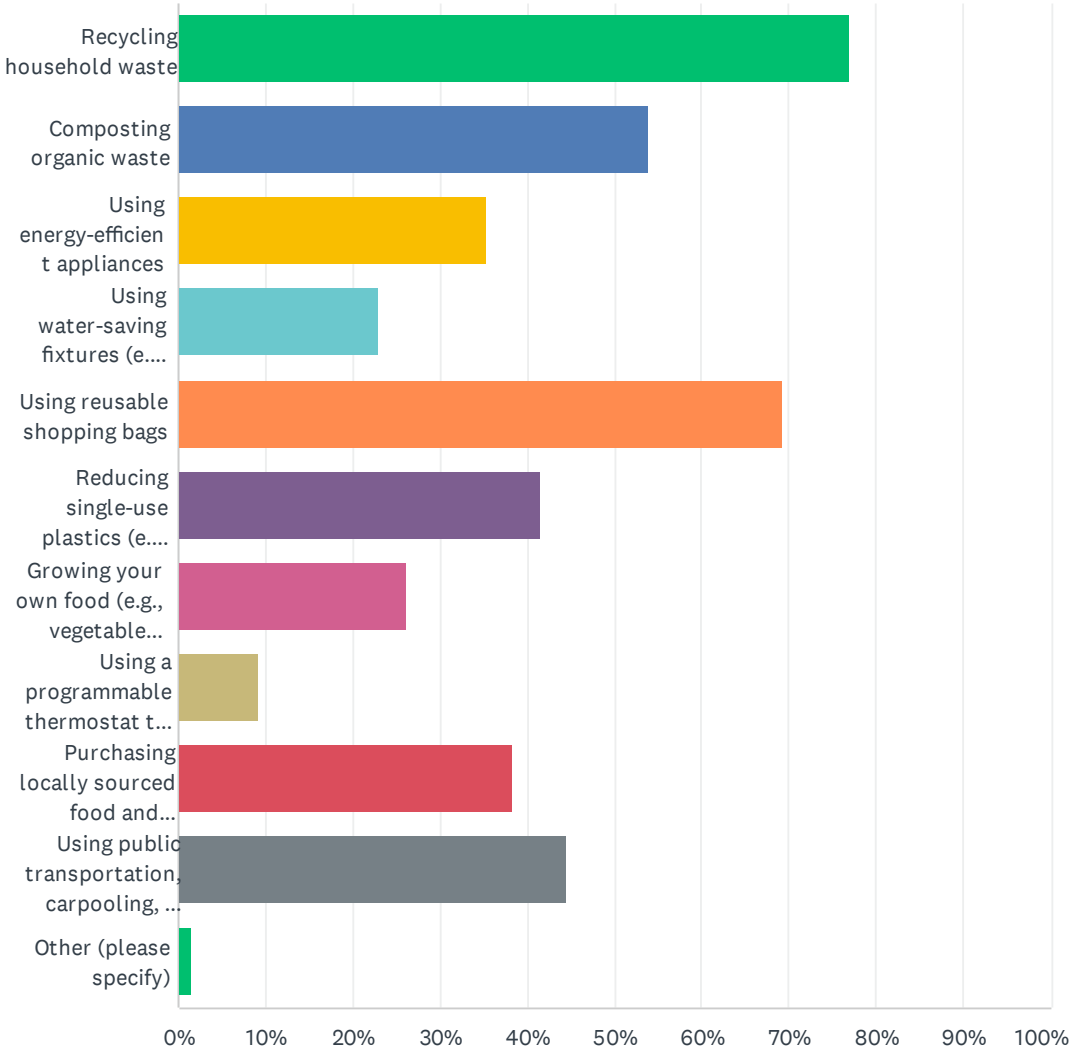
Answered: 67 Skipped: 20



ANSWER CHOICES	RESPONSES	
Excellent	20.90%	14
Very good	23.88%	16
Good	34.33%	23
Fair	17.91%	12
Poor	2.99%	2
I don’t know/not sure	0.00%	0
I prefer to not respond	0.00%	0
TOTAL		67

Q30 Do you engage in at-home sustainability practices? [select all that apply]

Answered: 65 Skipped: 22

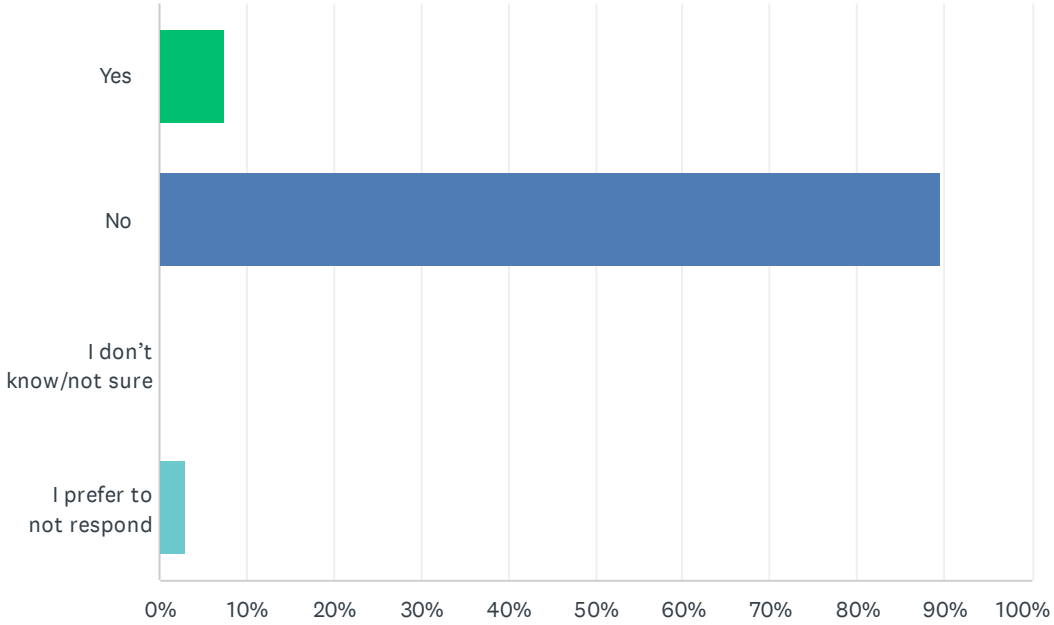


ANSWER CHOICES	RESPONSES	
Recycling household waste	76.92%	50
Composting organic waste	53.85%	35
Using energy-efficient appliances	35.38%	23
Using water-saving fixtures (e.g., low-flow showerheads, dual-flush toilets)	23.08%	15
Using reusable shopping bags	69.23%	45
Reducing single-use plastics (e.g., using reusable containers and utensils)	41.54%	27
Growing your own food (e.g., vegetable garden, herb garden)	26.15%	17
Using a programmable thermostat to reduce energy consumption	9.23%	6
Purchasing locally sourced food and products	38.46%	25
Using public transportation, carpooling, or biking instead of driving	44.62%	29
Other (please specify)	1.54%	1
Total Respondents: 65		

#	OTHER (PLEASE SPECIFY)	DATE
1	I don't	9/19/2024 4:16 PM

Q31 Do you have any health, physical, or sensory issues that limit your ability to walk or bike?

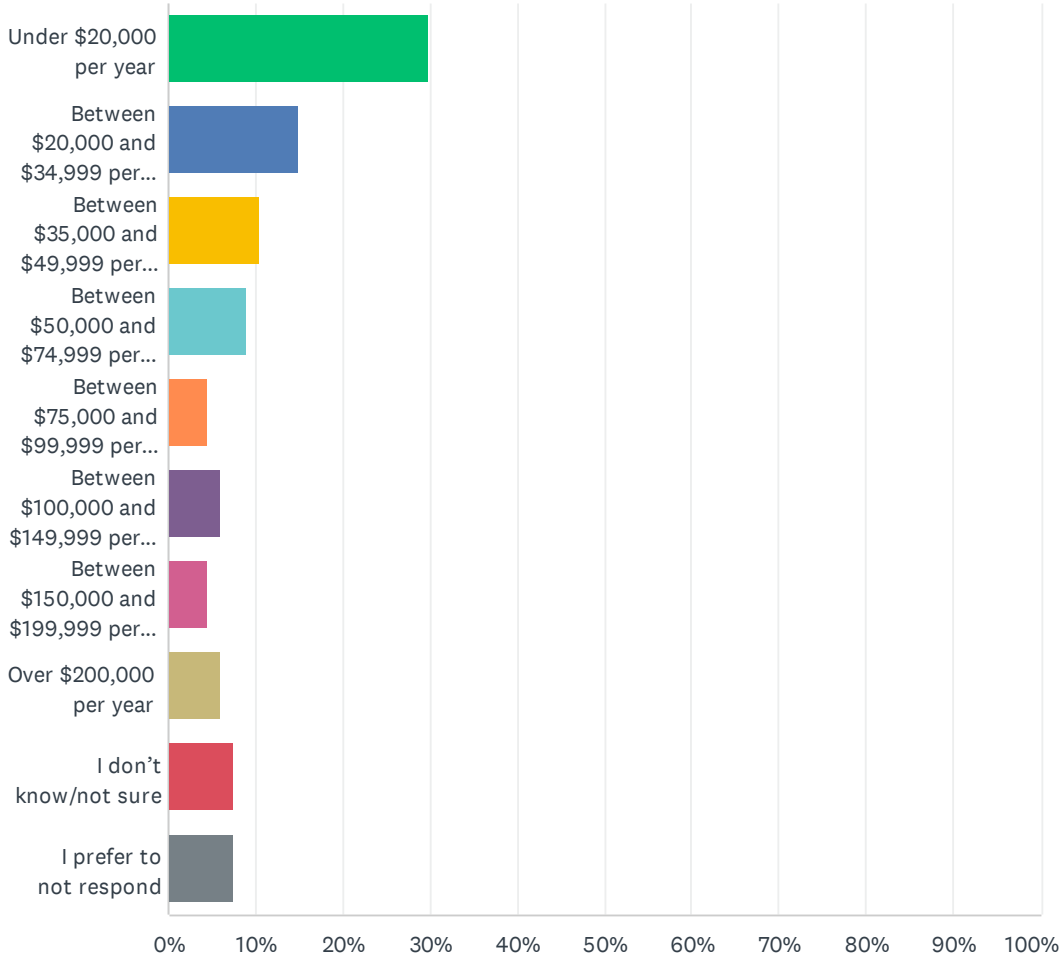
Answered: 67 Skipped: 20



ANSWER CHOICES	RESPONSES	
Yes	7.46%	5
No	89.55%	60
I don't know/not sure	0.00%	0
I prefer to not respond	2.99%	2
TOTAL		67

Q32 Which best describes your total annual household income before taxes? [Select one]

Answered: 67 Skipped: 20



ANSWER CHOICES	RESPONSES	
Under $20,000 per year	29.85%	20
Between $20,000 and $34,999 per year	14.93%	10
Between $35,000 and $49,999 per year	10.45%	7
Between $50,000 and $74,999 per year	8.96%	6
Between $75,000 and $99,999 per year	4.48%	3
Between $100,000 and $149,999 per year	5.97%	4
Between $150,000 and $199,999 per year	4.48%	3
Over $200,000 per year	5.97%	4
I don’t know/not sure	7.46%	5
I prefer to not respond	7.46%	5
TOTAL		67