

WOMEN4CLIMATE

SYDNEY

ON THE GO: HOW WOMEN TRAVEL AROUND OUR CITY

A CASE STUDY ON ACTIVE
TRANSPORT ACROSS SYDNEY
THROUGH A GENDER LENS

MAY 2020

CITY OF SYDNEY 

C4O
CITIES

CONTENTS

ACKNOWLEDGEMENTS	3
EXECUTIVE SUMMARY	4
INTRODUCTION	6
INTRODUCTION TO THE STUDY	7
DEFINITIONS	8
PREVIOUS RESEARCH AND THE SYDNEY CONTEXT	9
RECOMMENDATIONS	11
DISCUSSION	16
APPENDIX 1: RESEARCH APPROACH	33
WHAT DID WE WANT TO FIND OUT?	34
QUANTITATIVE DATA	35
GO-ALONG INTERVIEWS ACROSS GREATER SYDNEY	37
STAKEHOLDER WORKSHOP	38
APPENDIX 2: RESEARCH FINDINGS	39
HOW DO WOMEN TRAVEL AROUND SYDNEY	40
FINDINGS FROM WOMEN WHO WALK	42
FINDINGS FROM WOMEN WHO RIDE	44
FINDINGS FROM WOMEN WHO USE A COMBINATION OF TRANSPORT MODES	46
WOMEN WHO DON'T CURRENTLY WALK OR RIDE AS PART OF THEIR JOURNEY	47
DEVELOPING SOLUTIONS THROUGH A FEMALE LENS	49
READING LIST	50

ABOUT THE WOMEN4CLIMATE INITIATIVE

Climate change is unfair, and the impacts of climate change are unequally distributed: those who contributed least to the production of greenhouse gas emissions over the past two centuries, will be in the frontlines of the greatest impacts.

This is a particular burden for women, as climate change-induced disasters disproportionately affect women by exacerbating the already existing societal inequalities between men and women. Yet, their voices are not always heard due to lack of inclusion and representation at the decision-making level.

C40's Women4Climate initiative aims to advance women's leadership in climate action, support the future generation of women leaders and ensure their full participation in the climate change sphere. The initiative aims to:

- **empower and inspire** the next generation of climate leaders by developing a global mentorship scheme in participating cities.
- **raise awareness of the disproportionate impacts of climate change-induced disasters on women** and on their key role for the effectiveness of climate policies and the resilience of urban communities.
- **drive action through research and tangible urban policy recommendations** to guide gender-responsive urban climate action in cities.

Only by understanding the gendered nature of climate change, policies and programmes, can we deliver action that will benefit all citizens equally. C40's case studies focus on the collection of data that allows city officials to better understand and account for gender differences in urban planning and climate policies as well as transport and citizen engagement in climate action.

Previous Women4Climate case studies featured Paris, Barcelona, San Francisco and London as concrete examples providing practical insights for policy-oriented learning. By including a gender lens in the knowledge tools, we aim to provide city officials with the best available information on gender-specific solutions to help them implement inclusive climate action strategies.

To consult C40's *Women4Climate Report: Gender Inclusive Climate Action in Cities* and previous case studies, please visit: <https://w4c.org/knowledge-lab>.

ABOUT C40 CITIES CLIMATE LEADERSHIP GROUP

C40 Cities connects 96 of the world's greatest cities to take bold climate action, leading the way towards a healthier and more sustainable future. Representing 700+ million citizens and one-quarter of the global economy, mayors of the C40 cities are committed to delivering on the most ambitious goals of the Paris Agreement at the local level, as well as to cleaning the air we breathe.

ABOUT THE CITY OF SYDNEY

As part of its commitment to sustainability, the City of Sydney has for many years advocated for and invested in improving infrastructure, services and amenity for people who walk and cycle, to increase the use of active transport. Around 15% of carbon emissions in the City of Sydney local area come from transport. To reduce these emissions and improve amenity in our city, we need to see a shift from car-based transport to zero-carbon public transport and active transport. It's important that this shift does not disadvantage particular groups or exacerbate existing inequalities.

MICHELIN FOUNDATION



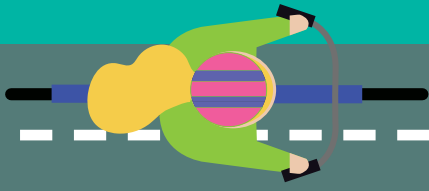
Created in 2014, the Michelin Corporate Foundation seeks to promote projects of general interest in five areas: Sustainable Mobility, Protecting the environment, Sport and Health, Education and the community and Heritage and the arts. The Michelin Corporate Foundation's purpose rests on its philanthropic actions which always aim at helping more towards the communities and at fulfilling its societal responsibility. The Foundation contributes to carry the values of respect and solidarity the Michelin group holds.

THANK YOU FROM THE RESEARCHERS



Cred Consulting conducted the research on behalf of the City of Sydney and C40 as part of the Women4Climate initiative. We would like to acknowledge and thank all the women who took time to participate in interviews and complete the survey, as well as the stakeholders who participated in the workshop.

EXECUTIVE SUMMARY



ABOUT THE STUDY

Why did we do it?



Walking and cycling are zero-carbon forms of transport; however, many women may experience barriers to active transport.



By better understanding women's unique mobility needs, we can empower and support them to use these modes.



This study is part of a broader move to collect gender-sensitive data to help us apply a gender lens to planning our cities, and build a more inclusive world.

What did we do?



We surveyed women online, and in person in three locations across Greater Sydney: in the inner city (Redfern), in south-western Sydney (Liverpool) and in north-western Sydney.



We walked and cycled alongside 18 women of different ages, abilities, cultural backgrounds, and experiences to learn their stories and better understand how they travel across Greater Sydney.



We spoke with experts from councils, the New South Wales Government, educational institutions and community organisations to co-develop planning and policy ideas that make walking and cycling more women-friendly.

ABOUT SYDNEY

Sydney is a growing city that is currently home to 5 million people from more than 200 cultures. They live in an area that spans 1.2 million hectares from the coast to the Blue Mountains.

Sydney's waterways, topography and infrastructure have shaped the way it operates, sometimes spatially dividing communities.

Those who live close to Sydney Harbour in the east have greater access to the city's economic heart, with higher-paying jobs and higher-ranking education compared to the rest of Sydney. They also have better public transport, and a cooler climate brought by higher tree canopy and cooling sea breezes.

Western Sydney has a disjointed public transport system, making residents more dependent on their cars. The area also has a greater concentration of socio-economic disadvantage, and its residents have more health challenges. It has a lower tree canopy and a hotter climate.

How do we travel now?

In Sydney, most journey-to-work trips are by private vehicle or public transport.

Sydney has the highest rate of trips by private vehicle in Australia (up to 80%), especially in the west and south-west.

Walking and cycling represent a very small proportion of journey-to-work trips, with 5% of people walking and 1% cycling to work in Greater Sydney.



To increase the number of women who walk or cycle as part of their everyday journeys, the following actions are recommended.



1 Challenge perceptions to increase women's participation and confidence.

Our research identified significant barriers to women walking and cycling, including their perceptions of people who walk or ride, and the fact many feel 'it's just not me'. Behaviour change programs and campaigns can help by working at a range of scales and targeting all women, including those from under-represented communities. This can range from peer-to-peer engagement through to whole-of-government campaigns that drive societal change and perceptions about who walks and rides.



3 Plan for safety beyond streetlighting and separated cycleways.

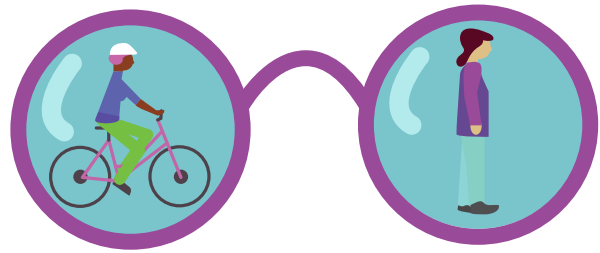
While infrastructure including separated cycleways and street lighting are important in helping women feel safe, this must go hand in hand with well-designed, inclusive public spaces and behaviour change.

Thinking about active transport as a network of active, welcoming places creates opportunities for passive surveillance, creating a greater sense of safety. Every street should be considered part of the walking and cycling network, with the aim of including, at a minimum, a shared walking and cycling path. Planning for a greater mix of land uses and simple interventions, such as colour and public art, can also be effective. Protection from harassment and abuse is a wider societal challenge, with opportunities for all levels of government to lead on changing behaviour (from catcalling through to sexual and physical violence) in the public domain.



5 Build end-of-trip facilities and women will walk and ride.

End-of-trip facilities play a significant role in women's decisions to walk or cycle to their destination. Showers, change rooms, locker facilities and secure bike storage racks are the kind of facilities and amenities that enable women to participate in active transport without worrying about their appearance at their final destination. Mandating end-of-trip facilities in private and commercial offices, shopping centres and large institutions such as hospitals and universities is a step in the right direction in encouraging women in their active transport journeys.



2 Don't be gender blind. Apply a gender lens that considers the needs of women when designing active transport infrastructure and transport.

If we continue to adopt a 'one-size-fits-all' approach to transport planning, we miss the start-to-finish infrastructure, behaviour change and policy that is required to support women to take up riding and walking. This includes acknowledging that not all women are the same. We need to design different approaches to reach different groups, and to fit the specific context of wherever we are planning for. This approach also changes the face and image of who rides on the road, potentially encouraging other women to ride.

Policy can also be better informed by doing more gender-specific research, allowing planners to have the evidence and data that will better support decision-making and planning for strategies and infrastructure.



4 Work hand in hand with public transport.

For many women who live far from their destination, active transport is only viable when supported by effective links to convenient public transport services. To encourage more women out of their cars, and on their feet or bicycle seats, public and active transport must go hand in hand. What could this look like? It is cool, tree-lined, safe, separated walking and cycling paths that link public transport hubs and stops to homes. It is providing inviting and attractive routes that offer quick and convenient ways to get around, including easy crossing points. It is also having secured places to lock up bikes at train and bus stations, or having designated spaces to take bikes onto buses and trains. Bus shelters that provide adequate cover, lighting and seating are also important.

INTRODUCTION

This study investigates walking and cycling undertaken by women for complex trips across Greater Sydney. Through a participatory methodology, it starts to unpack the key drivers, enabling factors and barriers that are shaping women's transport choices.



Rebecca: Go-along interview participant
Photo source: Cred Consulting

1

INTRODUCTION TO THE STUDY

WHAT IS THE STUDY ABOUT?

This study looks at how women travel around Greater Sydney and whether they walk and/or cycle as part of their everyday journeys. It explores the key drivers, enabling factors and level of use of active transport by women for complex trips (those that involve trip chaining and/or transporting a dependent person on a single journey).

Standard transport planning metrics only focus on commuting to and from work in peak periods. This creates a data gap around the use of active transport for complex trips, which are more often made by women, thereby resulting in policy decisions that potentially disadvantage how women travel around Greater Sydney.

Current data shows that overall the number of people walking and cycling has grown; however disproportionately, women are not making equal use of these modes of transport. This study is a starting point to better understand women's experiences in undertaking active transport and how these experiences shape their decisions.

WHY DID WE DO IT?

While walking and cycling are sustainable forms of transport, women may experience unique barriers to active transport. Two commonly reported barriers to active transport for women are safety (personal and physical) and the need for complex trips. However, the barriers to women walking and cycling for transport in Australia are under-researched.

This study seeks to better understand women's mobility to support planning outcomes that consider women's unique needs. This approach may also empower and enable women to make greener transport choices when moving around Greater Sydney, helping to alleviate the climate impacts of fossil fuel modes of transport.

Collecting data that is gender-responsive is an important step towards creating more universally accessible cities (including active transport infrastructure) that are not only women friendly but also inclusive of all ages, abilities and backgrounds. It is important to respond to our complex and diverse communities in sophisticated and targeted ways. Without being aware of the historical bias to designing cities for men, planning will continue the status quo (see Yon & Nadimpalli 2017; Perez 2019).

WHAT DID WE DO?

The study included quantitative and qualitative research methods to collect data on how and why women travel around Greater Sydney.

Quantitative research included a survey about a complex trip women undertake on a regular basis. The survey was distributed both online and in person across different urban contexts in Greater Sydney and attracted 889 responses.

Qualitative research included 18 'go-along' interviews with diverse women across Greater Sydney, with findings presented throughout this report. Following these stages, a stakeholder workshop was held with transport, health and planning professionals and advocates to develop and workshop recommendations that could help make active transport more inclusive for women.

WHO PARTICIPATED IN THE SURVEY?

GENDER

- 98.4% female
- 0.8% male
- 0.4% prefer not to answer
- 0.3% gender variant
- 0.1% transgender

AGE

- 3% aged 17 and under
- 19% aged 18-24
- 27% aged 25-4
- 22% aged 35-44
- 19% aged 45-54
- 8% aged 55-64
- 2% aged 65+

HOUSEHOLD TYPE

The most common household composition was couples with children (49%), followed by:

- Couples with no children (19%),
- Share house (15%)
- Lone person (12%)
- Single parent with children (5%)

DIVERSITY

Around 34% of respondents speak a language other than English at home, with the most common: Arabic (8%), Cantonese (7%) and Spanish (7%).

Respondents who identified as Aboriginal or Torres Strait Islander made up 1% of the total, and 4% of survey respondents identified as a person with a disability.

INCOME

Almost half of respondents had an annual household income over \$150,000 (46%). Other responses indicated:

- 8% under \$29,999
- 12% \$30,000 to \$75,000
- 11% \$75,000 to \$100,000
- 24% \$100,000 to \$150,000

OCCUPATION

The majority of respondents were in professional services occupations (72%) followed by students (18%). 7 per cent worked in service-related or casual roles and 3% described themselves as carers or stay-at-home mothers.

Mural at intercept survey site, Liverpool City Centre

Photo source: Cred Consulting



2

DEFINITIONS

ACTIVE TRANSPORT

Active transport is a way of moving around using physical activity (usually walking, cycling or scootering) rather than motorised transport. Active transport can promote physical, social and mental wellbeing, and involves zero carbon emissions, making it an environmentally friendly mode of transport.

COMPLEX TRIPS

Complex trips are those that involve more than one stop or mode as part of one journey. These journeys are often not captured in standard transport metrics, such as journey-to-work or travel surveys, which only report the 'primary' mode. Gender can affect daily travel behaviour, and there is considerable research indicating that women make complex daily trips because of work and home responsibilities. These complex trips mean that to get from A to B, compared to men, women often have a number of stops such as school drop-offs and pick-ups, running personal errands, caring for dependants, doing the shopping, and getting to work and back (Aguilar et al. 2015).

CLIMATE CHANGE

According to Australia's Climate Council, climate change is any change in the climate, lasting for several decades or longer, including changes in temperature, rainfall or wind patterns.

INTERSECTIONALITY

This refers to the overlapping and interdependent identities that women may experience, including income level, migrant status, race and ethnicity, religion, ability, age, sexual orientation and faith. These overlapping identities all play a critical role in how women experience travel journeys, and create overlapping and interdependent systems of discrimination or disadvantage.

WOMEN

This study takes an inclusive approach and defines 'women' as anyone who identifies as a woman. This recognises that gender is about self-identification, and a person's gender does not necessarily match their sex or physical appearance.

3 PREVIOUS RESEARCH AND THE SYDNEY CONTEXT

As walking and cycling are (near) zero emission modes of travel, they are important strategies for climate action. They also have important co-benefits including better health, reduced air and noise pollution, and greater affordability and inclusion (C40 Cities 2018, p3). As new urban transport solutions are being developed and implemented globally, it is critical that gendered implications are taken into account.

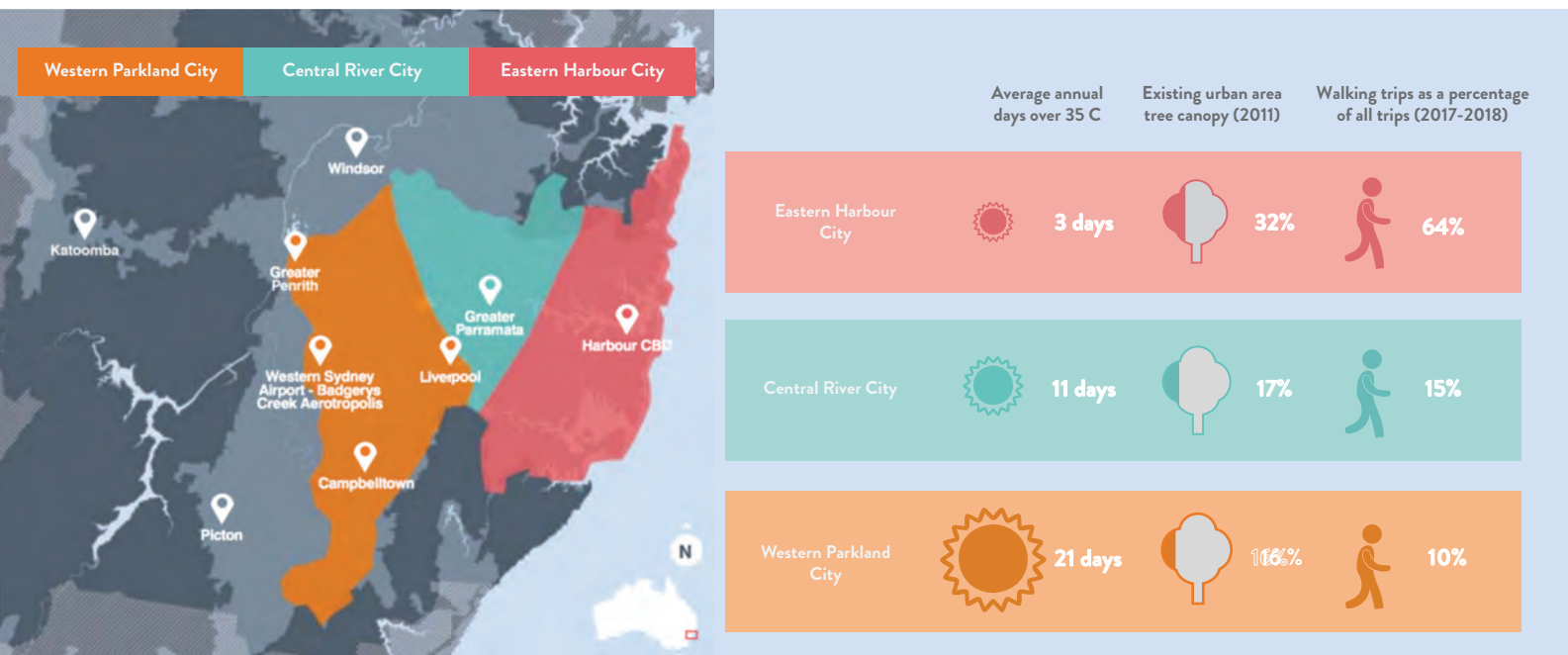
This study builds upon research previously undertaken by the Women4Climate initiative. From previous research, we know that gender influences how, when, where and why people travel in a city. It is linked to gendered division of labour, access to resources and perceptions of safety. To support women to adopt low-carbon and non-motorised transport, it is necessary to understand and plan for their differentiated transport needs (C40 Cities 2018, p 29).

While the San Francisco case study focused on bike riding and the use of bike lanes, there is significant alignment between the recommendations of that study and this study to increase the proportion of women walking and riding as part of their everyday journeys. In particular, the San Francisco case study also found that “social expectations about dress, grooming, and appearance persist...especially for women” (C40 Cities 2018, p 29).

In the article ‘Closing the gender gap in active transport’, Sharon Moller suggests “we should start to use female participation in active travel as an indicator of overall city health” (2018). Moller notes that the “immediate benefit of considering female walkers more seriously is inclusive public places”, and we know that well-designed and inclusive cities and public spaces have wide-ranging benefits for everyone, but especially women.

Urban planners across the world are trying to change how people move around cities, including how they use public spaces. Moller notes that “all the cities making changes share strong city leadership, supported by committed integrated transport agencies skilled in engaging and inspiring communities to act”.

More than three-quarters (86%) of Australians live in urban areas. Concentrated population growth brings challenges for Australian cities, including increasing traffic congestion and pressure on public transport, particularly at peak hours. The wide-reaching benefits of walking and cycling – social, economic and environmental – are being recognised by commuters and decision-makers alike.



Map source: Resilient Sydney: A strategy for city resilience 2018; data source: The Pulse of Greater Sydney: Measuring what matters in the Metropolis, Greater Sydney Commission 2019

GREATER SYDNEY: PEOPLE, PLACES AND MOBILITY

Greater Sydney is one of the most diverse cities in the world. It is home to around 5 million people from more than 200 cultures, and has the largest population of Aboriginal and Torres Strait Islander peoples in Australia. Greater Sydney stretches from the coast to the Blue Mountains, covering an area of more than 12,000 square kilometres, and it is still growing.

Sydney's waterways, topography and infrastructure have shaped the way that it operates, sometimes spatially dividing communities. Those who live in the east have greater access to the economic heart of the city, known as the Eastern Harbour City, and its public transport. This includes access to higher-paying jobs, better educational opportunities and a cooler climate due to tall tree canopies and cooling sea breezes.

Typically, those living in the west depend more on their cars because of the disjointed public transport system that is focused on commuters heading east, rather than north or south. Western Sydney also has a higher concentration of socio-economic disadvantage and people with health challenges, a hotter climate and less tree canopy cover.

Based on the New South Wales Government's Household Travel Survey, 18% of trips in Greater Sydney in 2017–18 were on foot. This regional figure disguises the variations between districts in the proportion of walking trips. The Eastern Harbour City is significantly above the regional figure, at 64%, whereas the other districts are either close to or below the regional figure.

Most journey-to-work trips are by private vehicle and public transport. Sydney has the highest rate of trips by private vehicle in Australia (up to 80%), especially in the west and south-west. The proportion of trips to work using public transport varies across the districts, which is a factor in the Greater Sydney Commission's 30-minute city indicator. Most public transport trips start or end with walking.

For journey-to-work trips, walking and cycling represent a small proportion, with only 5% of people walking and 1% cycling in Greater Sydney. Variations across the Greater Sydney area include 7% of journeys-to-work on foot in the Eastern Harbour City and 2% in the Central River City. The Eastern Harbour City also accounts for the highest proportion of people cycling to work, at 2%.

POLICY CONTEXT

A Metropolis of Three Cities: The Greater Sydney Region Plan

The Greater Sydney Commission has created a vision of three cities and five districts – the established Eastern Harbour City (North, Eastern and South districts), the developing Central River City (Central District) and the emerging Western Parkland City (Western District). It's built on a vision of three cities, with most residents living within 30 minutes of their jobs, education and health facilities, services and great places.

Part of this vision is a liveable, productive and sustainable city. Objective 12 of the plan is for great places that bring people together, through recognising and balancing the dual function of streets as places for people and movement, and recognising and celebrating the character places and their people. The Commission's recently released performance indicator framework has Walkable Places as one of its four top performance indicators.

Resilient Sydney strategy

Through the 100 Resilient Cities initiative, Resilient Sydney has developed a vision for a metropolis that is connected, inclusive and resilient. The directions reflect the priorities Sydneysiders wanted, including stronger community and transport connections.

Action 3 of the strategy is to collaborate for cross-city active transport. The strategy notes that we face challenges around connections and mobility as Greater Sydney grows. We also face more chronic illnesses linked to sedentary lifestyles that are affecting health and wellbeing. Through a network of mobility and transport practitioners, this action aims to explore opportunities for standards for a cross-city bicycle network, walkable neighbourhoods, and intergrated and accessible mobility planning.

Future Transport Strategy 2056, Transport for NSW

The NSW Government's Future Transport Strategy 2056, aims to encourage active transport by:

- planning centres with a greater focus on walking, cycling and public transport
- completing walking and cycling networks to and within centres, and investing in safe, direct and continuous green corridor connections
- providing secure bike storage across the network at selected railway stations
- Encouraging workplaces to have end-of-trip facilities, in turn encouraging employees to commute using active transport.

RECOMMENDATIONS

1. Challenge perceptions to increase women's participation and confidence.

Why is this important?

Tackling perceptions about who and why people walk and ride is critical to increasing women's participation and confidence. Our research found that how women perceive people who walk and ride, and the idea that 'it's just not me' can be a barrier. The research also found that walking and riding a bike can be seen to be what 'inner-city people' do, with more work to be done across the north, south, centre and west of Sydney to bust myths that walking and cycling in a suburban context aren't possible.

It's important that behaviour change programs and campaigns work at a range of scales, targeting women and under-represented communities. This can range from peer-to-peer engagement to whole-of-government campaigns that drive change and perceptions about who walks and rides.

What we heard

- When asked how people perceive women who ride a bike, nearly 10% of respondents referred to riders as being male, with 24 specifically referring to MAMILs (middle-aged men in lycra).
- A total of 23% of responses referred to walkers as people who live close to their destination.
- 13% referred to women who ride a bike as people who live in the inner-city or close to their destination.

Ideas to make it happen

- Establish travel companion programs, such as walking or riding mentors and women's walking buses to help build confidence, feelings of safety and connections.
- Partner with schools to talk to carers about the benefits and opportunities of riding or walking to school.
- Support the establishment of local women's walking and riding groups and programs, particularly in areas with existing low riding and walking participation and where women are more likely to feel unsafe.
- Encourage businesses, big and small, to initiate workplace programs to encourage active travel to work, or while at work encouraging travel by bike or on foot to meetings or site visits.
- Continue government-led behaviour-change campaigns targeted at improving attitudes and treatment of women in public spaces, and show the diversity of women who choose active transport.
- Ensure that government-led campaigns to promote and encourage walking and cycling depict diverse peoples and include different genders, cultural backgrounds, ages and abilities.
- Investigate new programs and subsidies to improve access to and the financial viability of electric bikes (e-bikes) for a greater number of women.

School drop off with go-along interviewee Sara (middle)

Photo source: Cred Consulting



2. Don't be gender blind. Include a gender dimension in transport planning.

Why is this important?

If we continue to adopt a one-size-fits-all approach to transport planning, we miss the start-to-finish infrastructure, behaviour change and policy that is required to support women to take up riding and walking.

This includes acknowledging that not all women are the same. Intersectionality is important to consider, as well as targeting the approach to fit the specific context of where you're planning for. For example, in Greater Sydney's west, with high proportions of newly arrived migrants from Middle Eastern and Central and SouthAsian areas, programs that target women of specific communities to ride, through community buy-in with leaders, would be hugely successful in increasing participation. This also changes the face and image of who rides on the road, potentially encouraging other women to ride.

These programs need to be supported by infrastructure so that women feel safe to ride. Policies can also be better informed by doing more gender-specific research for each district, allowing planners to have the evidence and data that will better support decision-making and planning for strategies and infrastructure.

What we heard

The research reinforced findings from previous studies: that women are undertaking complex journeys that involve multiple stops. We also confirmed that perceptions of safety and societal expectations strongly influence the choices of women to walk or ride for transport. Using a one-size-fits-all approach to transport planning, which traditionally sees the value of transport as a time and economic proposition, won't necessarily make walking and cycling more attractive or easier for women, particularly for those who need to undertake complex trips.

Ideas to make it happen

- Reinforce women's right to be part of city planning decision-making and ensure policy-makers consider women's unique mobility challenges.
- Actively support an equitable number of women in government and business leadership positions, bringing their perspectives and experiences into the decision-making processes about transport and city planning.
- Pro-actively reach out to under-represented communities in policy-making and undertake consultation and engagement in locations where these communities and women already gather (schools, child care and parks), and in settings that are accessible for diverse groups of women.
- The NSW Government, in partnership with local councils, undertakes further gender-specific active transport research that takes into account the different gendered needs and specific locational contexts across the Greater Sydney area, to support evidence-based policy and program development.
- Develop culturally specific women's riding programs in partnership with community leaders to increase visibility and acceptance of women walking and riding.
- Partner with local women's organisations, and actively engage with diverse women (across ages, abilities and cultures) when designing new active transport routes to ensure they respond to gender-specific challenges and barriers, and include women's perspectives and experiences.
- Ensure transport planning and policies create opportunities for women-led design and input to increase active transport choices and participation for all women.
- Future planning and transport decision-makers actively put themselves in women's shoes, and use quantitative methods and persona stories from this study as a starting point to better understand impact.



Go-along interviewee Colleen and interviewer Ellie
Photo source: Cred Consulting

3. Planning for safety beyond streetlighting and separated cycleways.

Why is this important?

The research found that physical infrastructure, such as separate cycleways and street lighting, are important in helping women feel safe and protected, and are key to influencing route choices. But these measures on their own aren't enough. To increase the number of women walking and riding, these factors must go hand in hand with well-designed people-friendly places, inclusive public spaces and behaviour change programs.

Thinking about active transport not only as footpaths, shared paths, bike lanes and separated cycleways, but also as a network of active, well-used and welcoming places, creates opportunities for passive surveillance and helps to create a greater sense of safety. This in turn may increase the number of women who walk and ride, at all times of the day and night.

Every street should be considered part of the walking and cycling network, with the aim of having shared walking and cycling paths, as a minimum. For riders, this also addresses road safety concerns by giving women the option of safely cycling off-road, helping to increase rider confidence.

It's also important to consider that in addition to parks and through-park links providing safer walking and riding routes in relation to traffic, women also need to feel personally safe at all times. This means ensuring that paths within parks are lit and co-locating routes with activity nodes such as courts and fields. This can promote further walking and riding which also provides health and wellbeing benefits and connections to nature and the community.

For walkers, lighting and closed-circuit television (CCTV) were important interventions. However, a greater mix of land uses and simple interventions, such as colour, public art and passive surveillance, also increase women's feelings of safety. Creating safer walking environments and walkable cities and neighbourhoods should be a consideration for all built environment professionals.

Protection from harassment and abuse is a wider societal challenge, with opportunities for all levels of government to lead on changing behaviours towards women (from harassment such as catcalling to sexual and physical violence) in the public domain.

What we heard

- When asked if there was anything they would like to change about their journey, personal and physical safety was the most common concern (15 comments) for women who walk.
- Traffic safety was the factor most likely to influence the route of women riders, with separated cycleways being the most common consideration (64% or 54 responses). Bike lanes (62% or 53 responses) and routes 'off a main road' and 'quiet to ride on' (57% or 48 responses) were also important.
- Safety and harassment shapes and limits women's active transport choice. One research respondent said: *"especially at night I go out of my way to walk somewhere that is exposed to other people and with sufficient light"*.

Ideas to make it happen

- Every local street should be thought of first as a walking and cycling street. They should include active, welcoming spaces; places to sit and rest; and trees, verge plants and greenery. A lower vehicle speed limit should also be required.
- Where possible, consideration should be given to replacing on-street parking on local streets with walking and cycling paths to provide pleasant and safe environments and minimise the risk of car dooring (being hit by a stationary car door while cycling).
- Factor separated walking paths and cycling lanes into initial designs or upgrades to all major roads.
- Engage with drivers to change perceptions and increase awareness and the experience of walkers and riders.
- When designing new active transport links and routes, include a women's safety audit methodology to better understand how different women experience and perceive urban environments and effectively respond to their needs and concerns.
- Through data, identify high-risk hotspots (locations dangerous to walk or cycle) so future collisions and casualties can be avoided or at least minimised.
- Widen pavements and cycle paths to accommodate future demand, particularly in high-density areas, and encourage use of active transport for short, local trips.
- Be creative. Experiment and incorporate colour, street art and planting into active transport infrastructure to create more pleasant and interesting environments.
- Provide resources and plan for cycling and walking links across local government boundaries to ensure continuous and regional networks that are clear and easy to follow and access.
- Plan for riding and walking shared paths leading to activity nodes (transport stations, courts, fields, shops, and community facilities) so they're more likely to be lit and active, with 'eyes on the street' passive surveillance.

4. Work hand in hand with public transport.

Why is this important?

A truly integrated transport system must link active transport routes with public transport hubs, stations, stops and services. For many women who live far from their destination, active transport is only viable when supported by effective links to convenient public transport services.

To encourage more women out of their cars, and on their feet or bicycle seats, public and active transport must go hand in hand. If we expect to increase women's participation in active transport, we need to build active transport infrastructure, and also focus on the quality, location and design of public transport infrastructure.

What could this look like? It is tree-lined and has safe and separated walking and cycling paths linking public transport hubs and stops to homes. It provides inviting routes that offer quick and convenient ways to get around, including easy crossing points. It also has secure places to lock up bikes at train or bus stations, and designated spaces to take bikes onto buses and trains. Bus shelters that provide adequate cover, lighting and seating are also important.

Integrating active transport routes with open space planning delivers a system of green infrastructure that is linked by walking and cycling paths.

What we heard

- The majority of journeys used a combination of transport modes (36%) or public transport (30%).
- The go-along interviews highlighted that women alternate between active and public transport modes, depending on weather (for example, heat and rain affect choices).
- For women who don't currently walk, the main barrier is living too far from their destination (66%).

Ideas to make it happen

- Prioritise the provision of safe, separated and inviting cycle routes and walking paths that connect destinations to public transport hubs. This includes trees, seating and convenient crossings.
- Provide adequate, safe and attractive bike storage facilities at transport nodes and expand popular facilities that are already at capacity, to cater for increased demand.
- Investigate more ways to provide space for bikes on trains and buses, including designing storage spaces on buses and trains or designating specific bike carriages.
- Continue to support micro-mobility options (for example, share bikes) at key transport nodes, and ensure that the future design of stations and interchanges provides space for this type of infrastructure.
- Embed a more holistic approach to city planning by integrating parks and green spaces as active transport routes, as well as recreation spaces, when undertaking transport planning.
- Conduct focus group discussions with both women's and men's groups to understand their needs and aspirations in relation to the public transport system.
- Conduct universal accessibility and women's safety audits of public transport infrastructure, including upgrades to stations with storage and lift access that accommodate larger cargo bikes.
- Combine women's safety audit methodology with service analysis to assess last-mile connectivity of transport infrastructure (terminals, bus and train shelters, multimodal hubs) against safety concerns when designing new active transport networks and routes.
- Include clear signage to walking paths, cycleways and bike hire docks inside transport hubs to encourage these modes and increase their visibility in the city.
- Government and businesses should introduce incentive programs and subsidies for buying walking and cycling equipment (that is, shoes, bikes and helmets).
- To minimise the effect of the climate and increase the number of women regularly walking and riding as a primary transport mode, investigate ways to provide increased access to e-bikes for all women.



Redfern Station in the inner city of Sydney

Photo source: Cred Consulting

5. Build end-of-trip facilities and women will walk and ride.

Why is this important?

End-of-trip facilities play a significant role in whether women will choose to walk or cycle to their end destination. Showers, change rooms, locker facilities and secure bike storage racks, are the kinds of facilities and amenities that enable women to participate in active transport without worrying about their appearance at their final destination.

Mandating end-of-trip facilities in private and commercial offices, shopping centres and large institutions such as hospitals and universities, is a step in the right direction in encouraging women in their active transport journeys.

Government also plays an important role by requiring end-of-trip facilities, and by demonstrating leadership and ensuring that they are the norm rather than the exception in their office buildings, parliaments and public institutions.

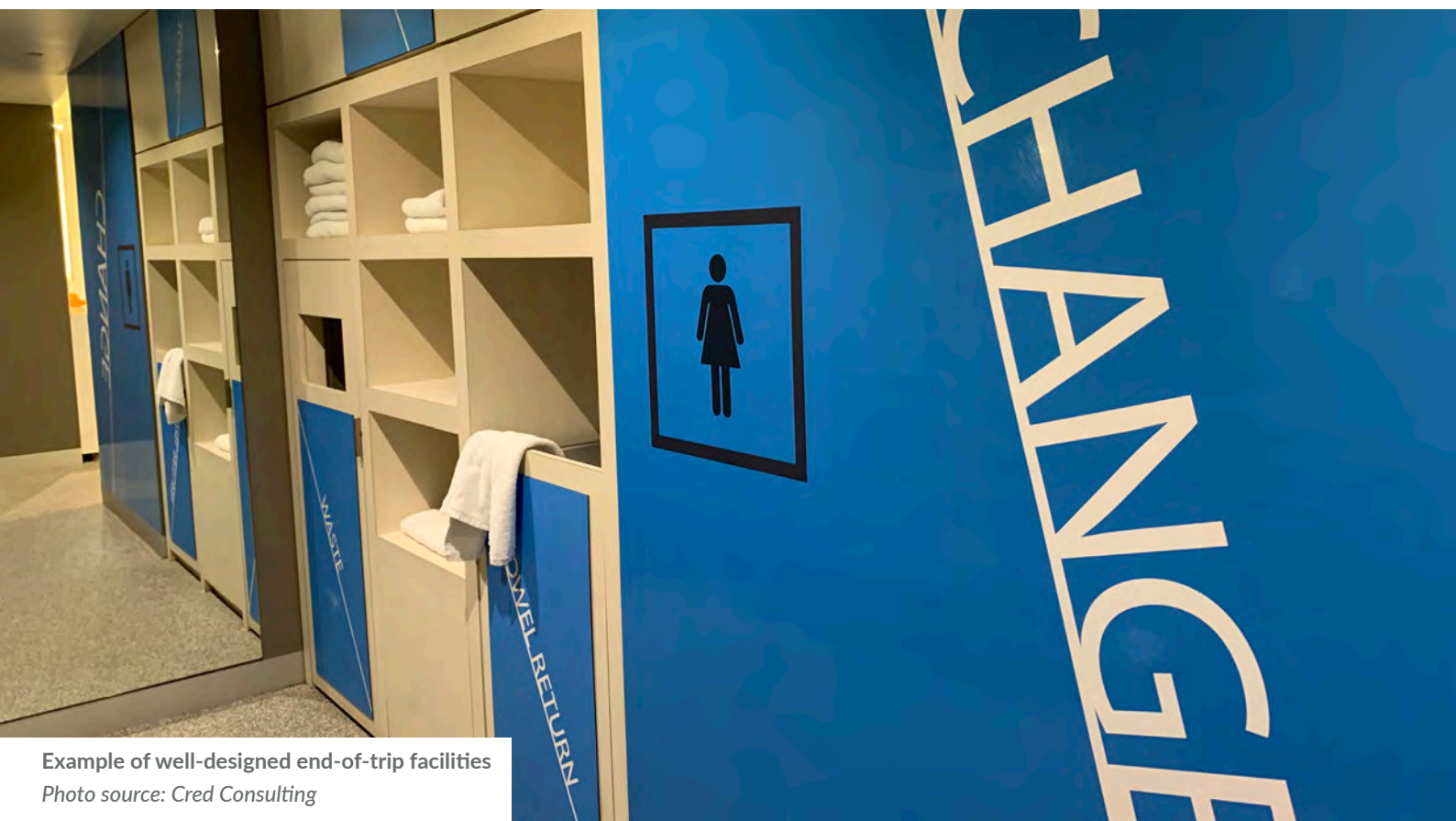
What we heard

- When asked about barriers to walking or riding a bike, a popular response was, “I don’t want to be sweaty when I reach my destination”(cycling 20%; walking 22%).

- Open-ended comments also referenced the problems of helmet hair, sweat and unsuitable work wear. They included “the helmet would mess up my hair and some of my work clothes are not bike friendly”, “wearing formal clothes like dresses and skirts doesn’t work well while riding a bike” and “it’d be unsafe, take too long, and I’d be sweaty”.

Ideas to make it happen

- Require high-quality, well-designed end-of-trip facilities, including showers, change rooms, locker facilities, hair dryers and secure bike parking. This would enable women to participate in active transport without worrying about their appearance or storage at their workplace or destination.
- Investigate a grants program to encourage local businesses to upgrade their premises to include end-of-trip facilities such as showers, hair dryers and lockers.
- Government should support businesses that encourage their employees to choose active transport modes.
- Partner with local government and private landowners to provide public end-of-trip facilities, particularly in local activity centres where clusters of small local businesses don’t have the resources, floor space or funds to provide individual facilities.



Example of well-designed end-of-trip facilities

Photo source: Cred Consulting

DISCUSSION



This section brings together findings across qualitative and quantitative research methods and organises them into the following key themes:

- Women's perceptions of walkers and riders may shape their transport decisions and behaviours.
- Caring is the purpose of a lot of women's trips and can influence the mode of transport they take.
- Concerns for climate and the environment are a factor for women choosing to walk or cycle over other modes.
- Safety is a key barrier to increasing women's use of active transport, in terms of both traffic safety and personal safety.
- The health and wellbeing benefits of walking and riding a bike were found to be well known and valued by people who already ride and walk.
- The financial benefits of walking and cycling motivate people to use these modes of transport.

Women's perceptions shape their transport decisions and behaviours.

The idea that walking and riding a bike is 'just not what people like me do', was a theme across the research. This was more prominent from participants who rode a bike. Go-along participant Lisa, despite riding regularly, spoke about how she still didn't consider herself to be a cyclist "... because I have cyclist friends and they are the kind of people who wear lycra. I cycle long distances, but I just go slowly and in my normal clothes or wear my tracksuit pants ... I've never bought any lycra. It doesn't suit me".

Figures 1 and 2 on the next page illustrate survey findings in relation to how participants perceive people who ride a bike and those who walk as their primary mode of transport. When asked "is this you?", only 21% described themselves as someone who rides a bike, while 43% described themselves as someone who walks.

In addition to describing people who ride as being fit, healthy and active (47%), respondents also described them as environmentally conscious (15%) and confident (15%), with nearly 10% referring to riders as male or MAMILs (middle-aged men in lycra). The notion that riding a bike for transport was more for males was also discussed in the go-along interviews, with participant Victoria speaking about how she brings her helmet into the office to challenge stereotypes. She "thinks it's good to be a bit more visible because sometimes people think those who cycle to work are men of a certain age who wear lycra".

Varying expectations that are based on factors such as women's age, place, cultural background and whether they are mothers, also further shape their transport decisions and behaviour. These expectations are described below.

- **Appearance:** Expectations that women were not sweaty, and look polished, with neat hair, freshly washed and ironed clothes, heels and dresses or skirts, were raised in the survey and interviews as a barrier for both riding and walking. Additional barriers could be lack of end-of-trip facilities, or lack of time to ride or walk and maintain the expected look.

When asked about barriers to walking or riding a bike, a popular response was, "I don't want to be sweaty when I reach my destination"(cycling 20%; walking 22%). Open-ended comments also referenced the problems of helmet hair, sweat and unsuitable work

wear. They included "the helmet would mess up my hair and some of my work clothes are not bike friendly", "wearing formal clothes like dresses and skirts doesn't work well while riding a bike" and "it'd be unsafe, take too long, and I'd be sweaty".

- **Cultural expectations:** Some participants noted the limited visibility of women riding bikes, and the near invisibility of culturally diverse riders. Muhadissa, a go-along participant, spoke about how riding a bike is a "small dream" of many Afghan women. "In my culture, it's very strict. You are not allowed to do the same things men do – even in Australia," she said. Migrating from a place where a woman who rode a bike would be arrested or killed has meant that many women in her community don't know how to ride a bike, or community expectations hold them back (see Muhadissa's story on page 17). Other newly migrated women shared similar stories. Riding programs that target culturally diverse, migrant women would help increase their visibility, and potentially their participation.
- **Inner city verses suburban areas:** Throughout the research, there was a strong perception that women who are riders and walkers are inner-city dwellers, and those who live in outer, suburban areas of Sydney. When conducting the go-along with Melissa, a mum who lives in Sydney's suburban south, the researcher noted how many people turned their heads along the trip at the sight of Melissa and her two kids riding their cargo bike. Melissa's response was "I think in the Inner West [and inner city area of Sydney] people are more used to seeing it. But in good old suburbia not so used to it".

Cycling and walking infrastructure is usually non-existent outside inner-city local government areas. The combination of long distances between destinations and more challenging weather conditions can make walking and riding a bike difficult, resulting in a suburban culture where women aren't seen to be riding or walking as a regular mode of transport. Despite the lack of cycling infrastructure, and even lack of footpaths along her route, Melissa still chooses to ride with her children (see her story on page 18).

This graphic presents the findings from the question
 "How do you perceive people who ride a bike as their main mode of transport?"

N = 777

WOMEN PERCEIVE PEOPLE WHO **RIDE** AS BEING ...



Fit, healthy and active

47% referenced riders as people who are fit, healthy or active



Environmentally conscious

15% considered riders as people who care about and are conscious of the environment



Confident, adventurous and brave

15% thought riders are people who are confident, adventurous and brave



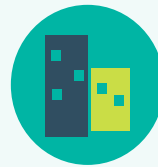
Male

10% noted that riders were male.
 3% also referenced people who ride a bike as 'middle-aged men in lycra' (MAMILs)



Young, in their 20s

8% thought people who ride bikes are young, or in their 20s



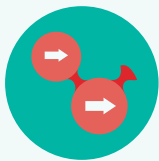
Lives in the inner city/area with cycling infrastructure

7% said riders live in the inner city or in an area with cycling infrastructure



Everybody!

7% said people who ride are everybody or "me" and "my friends"



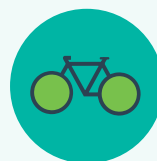
Those living close to where they're going

6% noted that riders have to live close to their destination



Organised and efficient

4% said riders are organised and efficient



Those who enjoy cycling

3% said people who ride are people who enjoy it



Factors in how they look when they reach their destination

3% said people who ride have access to end-of-trip facilities. 3% referred to people who don't mind being sweaty

WHEN ASKED 'IS THIS YOU' WOMEN SAID ...



Figure 1 - Perceptions of Riders

This graphic presents the findings from the question
 “How do you perceive people who walk as their main mode of transport?”

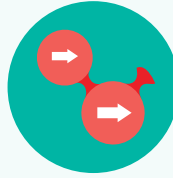
N = 770

WOMEN PERCEIVE PEOPLE WHO **WALK** AS BEING ...



Fit, healthy and active

47% referenced people who walk as those who are fit, healthy or active



Those who live close to where they're going

23% noted that walkers are people who live close to their destination and amenities



Those who have spare time

9% spoke about how people who walk have time on their hands



Everybody!

9% said walkers were everybody



Those who enjoy walking

8% said people who walk are people who enjoy it and prefer walking to using a car, public transport or a bike



Frugal

8% spoke about walkers as people who can't afford other modes of transport or people who like saving money



Environmentally conscious

7% considered walkers as someone who care about and are conscious of the environment



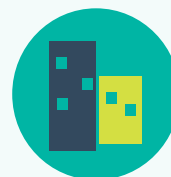
Unable to drive

5% said walkers are people who don't or can't drive



Young and energetic

4% said walkers are young, energetic people



Those who live in the inner city

4% said walkers live in the inner city



Relaxed, calm and sensible

3% said walkers are relaxed, calm and sensible. While 2% thought of them as community minded, happy and friendly

WHEN ASKED ‘**IS THIS YOU**’ WOMEN SAID ...

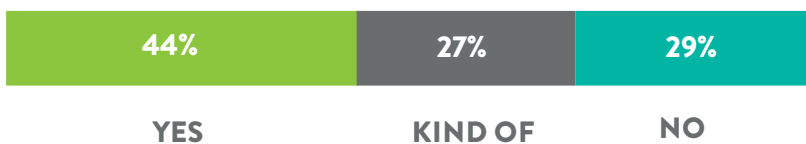
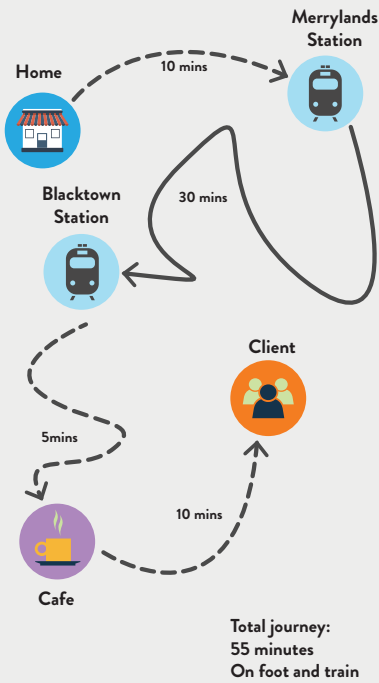
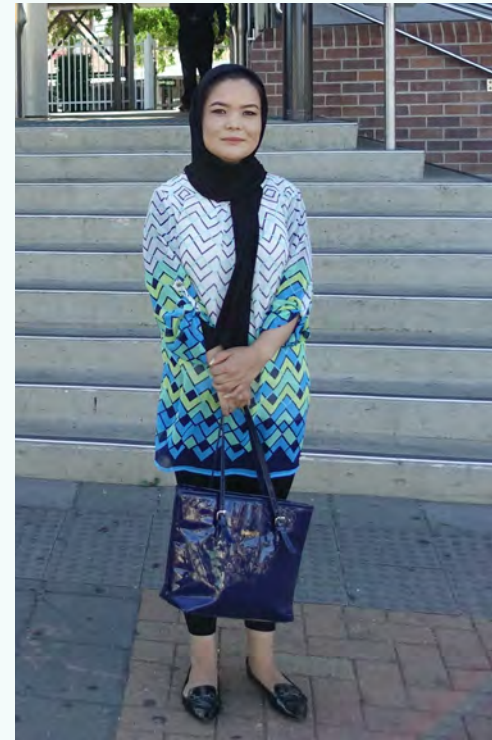


Figure 2 - Perceptions of Walkers

Women of Sydney: Talking about social perceptions and cultural influences shaping choice

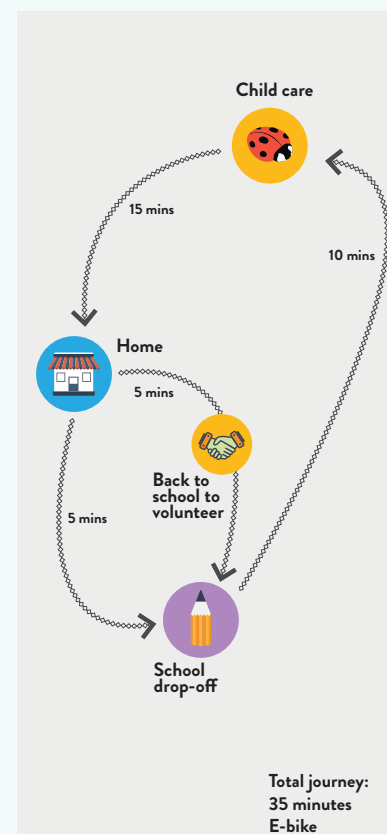
MUHADISSA (24) CULTURE INFLUENCING CHOICE

As a Hazara refugee woman, Muhadissa's dream is to ride a bike. In Afghanistan, women in her community were persecuted for simple acts like walking unaccompanied or riding a bike in public. Now she lives in Australia, Muhadissa's parents sometimes worry about what could happen to her if she cycled to get around – and there is the added hurdle of learning how to ride. Muhadissa currently walks and catches public transport. She doesn't own a car because it's too expensive to run and is not good for the environment. While she feels safe in Merrylands, the multicultural suburb where she lives, she sometimes feels uncomfortable in other parts of Sydney, where people may stare at her or discriminate against her because of her headscarf. To her, feeling safe when walking and on public transport means feeling welcome.

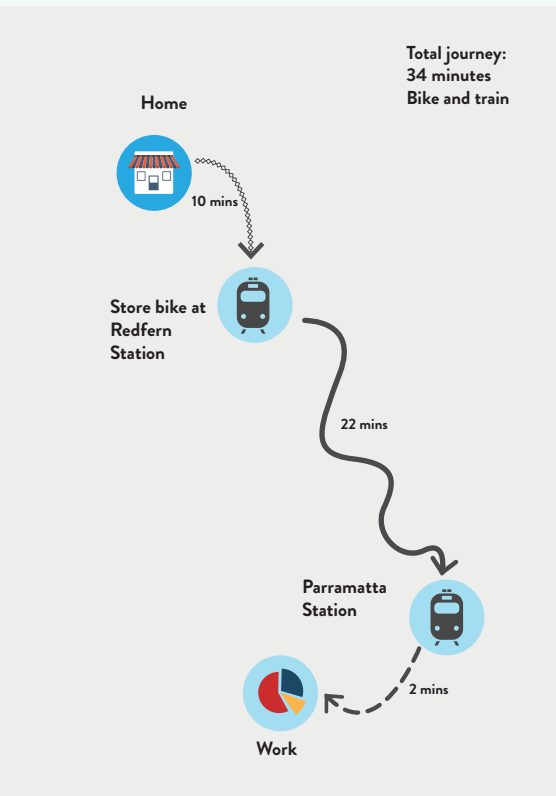


MELISSA (30s) SUBURBAN CYCLING CHAMPION

Melissa started riding her electric cargo bike only a few months ago, but has already racked up more than 600 kilometres in her hilly, suburban neighbourhood. Melissa started cycling because she was concerned about the environmental impacts of driving, but also to incorporate more exercise into her family's busy life. Melissa's two daughters love riding on the back of the bike on their daily commute to primary school and day care. Now the family cycles, Melissa thinks they are much more connected to their surroundings, often pointing out wildlife or other natural features along the route. While Melissa was initially concerned about riding on the road (there is no cycling infrastructure in her area), she has become a much more confident rider over time. Melissa would like other mums in the suburbs to know that cycling is not just for inner-city people, and that trialling an e-bike is a good way to experience how a bike can reduce the number of short car trips you have to take.

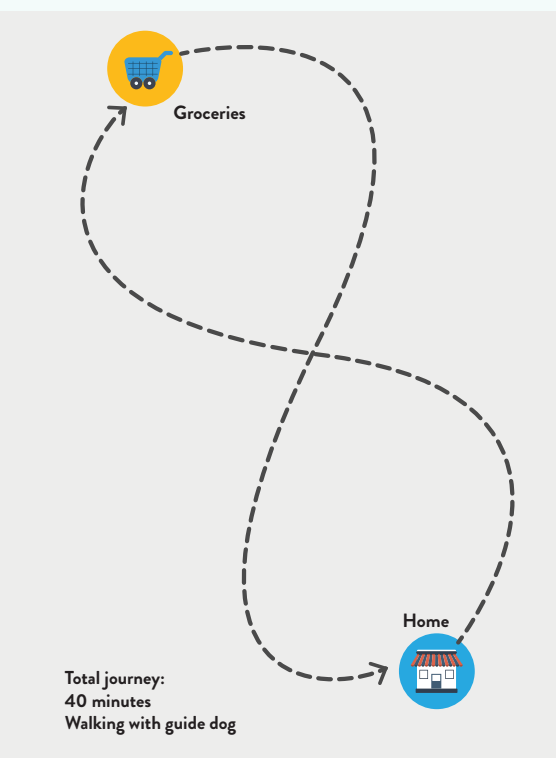


Women of Sydney: Talking about social perceptions and cultural influences shaping choice



VICTORIA (30s) SHATTERING STEREOTYPES

From cycling in Perth, to cycling in Sydney, Victoria finds riding a bike is the most practical mode of transport to get around, and it gives her a sense of independence. For Victoria, building confidence as a cyclist and finding safe and convenient routes in her area took time. Sharing the road is one of the most difficult barriers to riding a bike. After being in an accident involving a car, it took Victoria almost five months to rebuild her confidence in cycling on the roads again, by riding shorter distances with her partner. Victoria suggests incorporating a cycling safety education aspect as part of driving tests to enhance awareness. Bringing her helmet into the workplace has sparked conversations and has prompted other women to ride a bike more. Being visible also helps to break stereotypes around who cycles to work, with the typical perception being “men of a certain age who wear lycra”.



HEATHER (50s) + ZEPPELIN (11) VISION-IMPAIRED NAVIGATION

Born with glaucoma and vision impaired since age six, Heather has had her assistance dog, Zeppelin, for nine years. Their primary modes of transport are walking and public transport. While technology and apps have made travel easier, being familiar with routes and planning ahead is their most important consideration, especially on hot summer days. Heather says that having pale coloured roads and footpaths helps reduce the heat, particularly for Zeppelin. While street trees are great, overhanging branches and tree roots can make it difficult for people who are vision impaired to get around. Heather notes that having clear paths to follow through parks, rather than just all grass, enables her to walk through parks as part of their journey.



Responsibilities shape women’s transport choices.

Caring responsibilities were the reason behind the majority of women’s stops. The research found that 68% of participants stopped along their journey. Of those who stopped, 67% of stops related to a caring responsibility, including dropping children at school or child care (168 respondents), shopping, including for groceries (159), running errands (36), dropping children at activities (19), or responsibilities related to elderly parents or parents-in-laws (3) or pets (3).

Some participants described the way these caring responsibilities shaped their journey. These included stopping to “support mother-in-law”, “child care pick-up”, “opportunity to visit my disabled father-in-law”, “shopping with daughters” and “taking public transport home to pick up my car to collect my step-children.”

Often, women don’t walk or ride a bike because their caring responsibilities add complications, such as taking a lot of time, having to carrying items, having multiple children, making multiple stops or having to travel too far to walk or cycle.

During the go-along interview with Clare, a mum of two young children, she said that before having children she caught the bus to work. But driving makes dropping her son at child care (her husband handles their daughter’s preschool pick-up and drop-off) faster and less complicated. She also noted that driving allows her to manage her time, getting to work by 7.30am and finishing by 4pm to pick up her son and be home to prepare dinner.

When asked how she thinks gender shapes her transport choice, Clare said she felt that it does but “only in terms of my role as a mum ... and [my] sense of responsibility for looking after the kids and making sure that [I don’t] pick up my son too late and ... get home so late that they’re exhausted and tired and grouchy”. Talking to Clare and other survey respondents, caring responsibilities and time management are the key travel considerations for women.

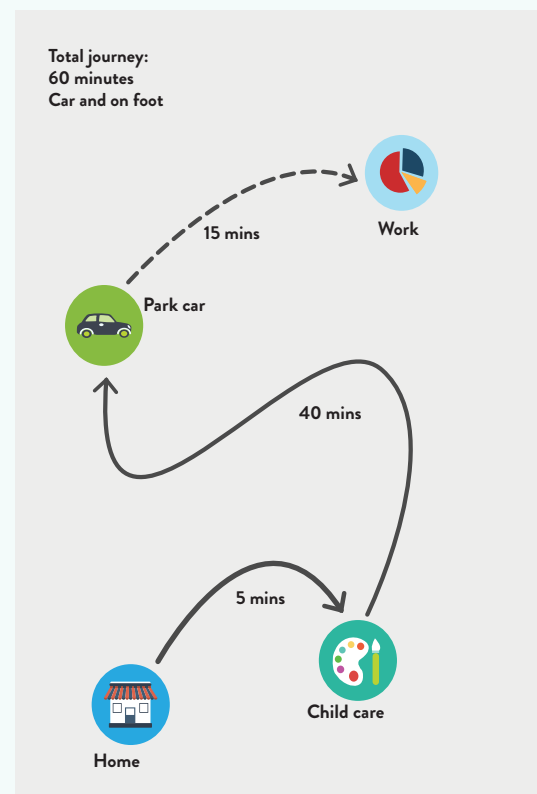
“DO YOU OFTEN RUN ERRANDS ON THE WAY HOME AFTER YOU PICK UP THE KIDS? YEAH, THERE’S ALWAYS SOMETHING TO DO, HONESTLY LIKE WITH ALL PARENTING.”

Women of Sydney: Talking about responsibilities and convenience influencing choices



CLARE (40) DRIVING TO SAVE TIME

With two jobs and two preschool-aged children, Clare chooses to make her travel more convenient by driving, although parking near work is challenging and can be frustrating. However, her only public transport option is a long and winding bus route, which she said can be nauseating. Clare leads a busy lifestyle and finds that driving is more efficient for her tight schedule and for wrangling all the bags. However, it’s lovely when she can walk with her children to child care. They usually pick flowers for their teachers along the way. Clare would love to walk or ride as her primary mode of transport. Despite not being a confident rider, she is keen to get her kids riding, but most journeys would need to be on shared pedestrian bike paths

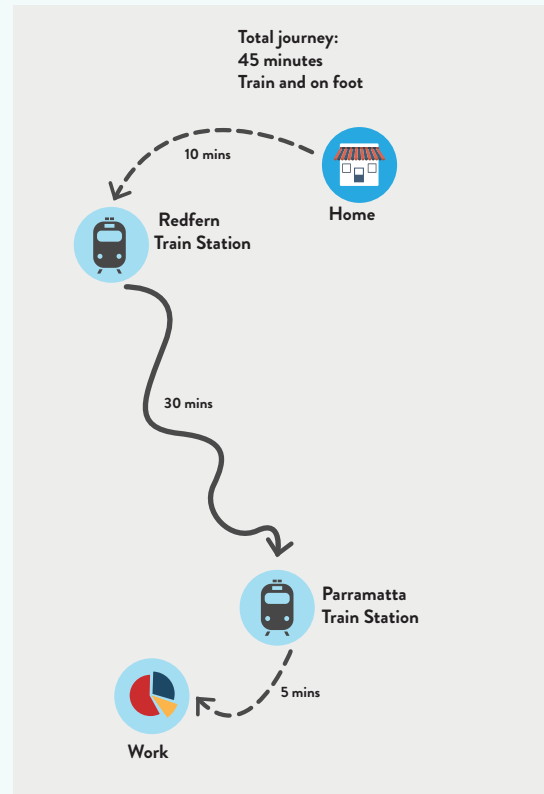


Women of Sydney: Talking about responsibilities and convenience influencing choices



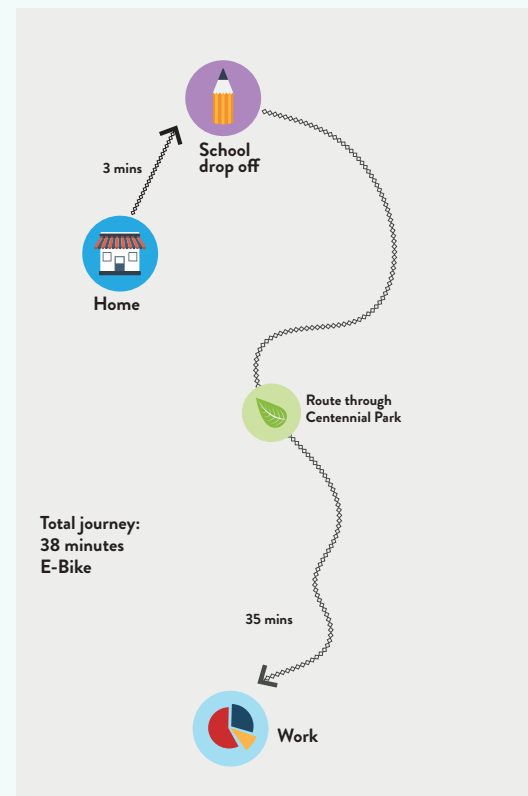
TANJA (30s) TRAIN PROVIDES 'ME' TIME

Tanja moved to Sydney three years ago from Germany and chose to live close to Redfern Station, for an easier commute to Parramatta for work. While not initially comfortable walking at night from the train station, she doesn't worry about it now, mainly because she is more familiar with her neighbourhood. Tanja likes the train as it gives her time to relax, read a book or chat with her family. The environmental impact of transport is something she and the majority of her friends considered when choosing not to own a car (admitting she is influenced by environmentally conscious people in her area). Tanja sometimes uses her bike for transport at weekends and says the limited number of dedicated cycling paths in Sydney means having to plan your route ahead of time. Overall, Tanja thinks recent changes to active and public transport in Sydney have made these modes more user-friendly and convenient.



SARA (40s) ACTIVE TRANSPORT ADVOCATE

Sara always rides her bike, no matter where she's living or working because for her it's the most reliable mode of transport. And when riding through Centennial Park, she "gets to breathe and sometimes sing". Riding an electric cargo bike means she can wear work clothes and still take on the steep hills of the Eastern Suburbs. While she has been riding most of her adult life, when she was living on the north side of the Sydney Harbour Bridge, the lack of cycling infrastructure led to a frightening experience after only one commute to work. Her electric bike is perfect for dropping her two children at school on her way to work as well as carrying her swimming gear and laptop. Sara has noticed a rapid uptake of electric bikes among the parents at her children's school. At work, she has access to high-quality end-of-trip facilities that have clothes dryers and a steam iron.



Concerns for climate and the environment were a factor for women choosing active transport over other modes.

A total of 87% of women who indicated in the survey that they ride a bike said they choose to do so because “it’s good for the environment”. More generally, women who ride were perceived as being environmentally conscious. Interestingly, more women who ride a bike were motivated by environmental concerns than those who walk.

A number of go-along participants said the environment was a strong consideration in their transport choices. Regular cyclists Lisa and Megan noted that while climate change was a global issue, they felt they had an important role to play in lowering their own emissions and that riding a bike actively reduced their impact locally. In discussing the role of environment in transport choices, Megan noted that it “definitely” does. *“I think about what sort of small actions you can take, and working at a hospital and talking to people about the effects of climate change and air pollution on health is massive. And it will continue to be so, and leaving your car at home is the best thing you can do.”*



I DON'T REALLY LIKE DRIVING ANYWAY. I THINK ABOUT WHAT SORT OF SMALL ACTIONS YOU CAN TAKE, AND WORKING AT A HOSPITAL AND TALKING TO PEOPLE ABOUT THE EFFECTS OF CLIMATE CHANGE AND AIR POLLUTION ON HEALTH IS MASSIVE. AND IT WILL CONTINUE TO BE SO, AND LEAVING YOUR CAR AT HOME IS THE BEST THING YOU CAN DO.

Tanja and Muhadissa, go-along participants who both use a combination of walking and public transport, said they get enjoyment from catching the train and actively lowering their emissions footprint. Muhadissa said she *“loves to catch the train, the train is my favourite ... We have to look after our climate. If everybody had to drive a car, it's not good for the earth.”*

Aline, another go-along participant, said driving a car was *“not the most ideal when it comes to the environment. But it's my only option, so I guess I feel a little less guilty.”* She lives in the suburbs and has no direct access and limited connections to public transport. She, like so many across Greater Sydney, is challenged in being able to opt for zero-carbon transport modes due to the limited or non-existent active and public transport infrastructure and services available close to home.



Aline on her journey to work
Photo source: Cred Consulting

Women of Sydney: Talking about transport choice and concerns about our environmental future

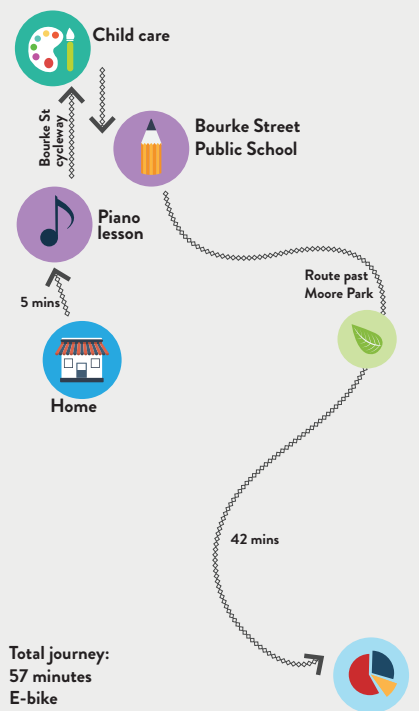
JULIA (37) + CHIP (6 MONTHS) IMPACT ON FUTURE GENERATIONS

Since becoming a mum, Julia has become even more aware of her environmental footprint and the world she will be leaving to her child. Maternity leave has meant that Julia “stops to appreciate the moment” more, but walking is not always easy with a pram. She prefers an active commute because she isn’t the gym type, and walking and riding give her some daily exercise. From a health perspective, she said that more people walking and fewer driving means less air pollution. It’s also great for mental health. Julia talked about how getting around is linked to fundamental societal beliefs about women, how we value women’s work and women’s role in society. She wondered where the ‘thread’ starts and ends when making gender-inclusive riding and walking policies.



AMELIA (42) THREE KIDS + ELECTRIC CARGO BIKE

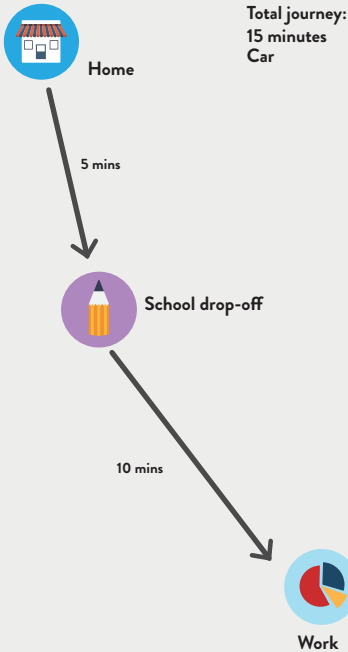
Amelia made a conscious decision to build her confidence as a cyclist and ride to work. Since moving to Sydney from Perth, she has never owned a car and riding a bike has been her primary mode of transport. Strong concerns about climate change, pollution and the dangers of increasing numbers of cars on the road have been a key factor in Amelia’s transport choices. As much as she enjoys walking, riding a bike is more time-efficient and convenient when travelling with her children. Roads and footpaths that aren’t designed for cyclists are one of the biggest barriers in Sydney and wider footpaths and connected cycling paths would encourage more women, and in particular mothers, to ride a bike. Increasing shade through awnings and more trees to protect cyclists from extreme weather conditions is key. On a recent trip to London, Amelia noted how people are made a priority, and how shade and slow-moving traffic can play an important role in feeling safe and confident when riding a bike.



Women of Sydney: Talking about transport choice and concerns about our environmental future

ALINE (30s) LACK OF CHOICE

Aline would love to be able to walk or ride to work. But in her suburb, driving is the only option, which Aline knows is not ideal for the environment. She drops her two children at school on her way to work. Her commute is only 20 minutes by car, but would take hours by public transport because there is no direct access and limited connections. Aline uses her car to run errands at lunchtime and for after-school activities, saving her time. As a child in Lebanon during the civil war, she couldn't play much, and the freedom to cycle, play outside and walk to school with her best friend was something she valued when she moved to Australia at age seven. Despite the lack of walking and cycling infrastructure in her area, when they are a little older, she would like her children to ride a bike or catch a bus to school, which she sees as a rite of passage.

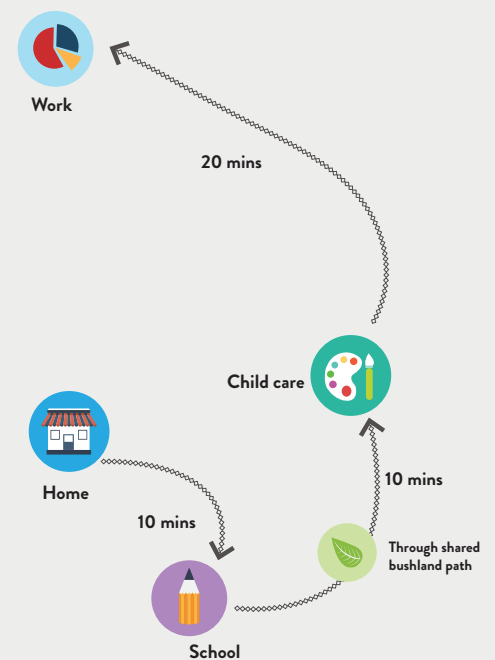


MEGAN (40s) ENCOURAGING SUSTAINABILITY

As a sustainability officer, Megan is a keen cycling commuter who is passionate about encouraging people to ride more often on their day-to-day journeys. Feeling frustrated over unpredictable and overcrowded bus services, and lengthy walking routes, riding a bike was her next best option 10 years ago. She has never looked back. As a mum, she cycles with her children to day care and school. She now realises that she was more risk-tolerant before having kids. For example, health professionals gave her the 'thumbs up' to continue riding while pregnant, but some people questioned her choice. Now when commuting, Megan tends to use safer, scenic routes, not only with the kids, but for herself as well. Promoting bike culture in the workplace and providing incentives to ride to work – such as bike hire and end-of-trip facilities – and promoting safer and more convenient bike routes are initiatives Megan is introducing in her workplace. She feels they will encourage women to ride and walk more.



Total journey:
40 minutes
E-bike



Perceptions of safety are a key factor in women's transport choices.

How women perceive safety, whether on the roads (such as concerns about being injured by a vehicle) or personal safety (such as concerns about harassment or violence), was found to influence behaviour and transport choices.

Women who ride a bike said that when choosing a route, they are most likely to consider infrastructure and roads that are more protected from traffic, such as through separate cycleways (64% or 53 responses), bike lanes (62% or 53) or routes that are "off a main road" or "quiet to ride on". The research found that for cyclists, physical safety was more likely to be considered than personal safety.

When asked about the role gender plays in transport choices, Amelia, a go-along participant who currently rides, said, "I think definitely women are more, I guess in terms of comment from peers or other mums, they're much more scared about going in traffic than men are." Clare, another go-along participant who currently drives, was asked if she wished she could cycle more as part of her journey. She replied, "No, my husband is a cyclist and I know lots of cyclists. I'm not a confident rider. I do have a bike that we ride around but I just feel really unsafe on Sydney roads." The survey drew many similar responses, referencing the unfriendliness of Sydney drivers, who are seen as the key barrier to the uptake of cycling. This is particularly the case for women, who are often less confident than men about riding in traffic.

Women who walk were less concerned about traffic safety and more concerned with personal safety. When asked about her journey, one respondent noted that she avoided walking in her local area at around 3pm to avoid catcalling from tradesmen who were finishing work at that time. This issue of personal safety and harassment was also discussed with a number of the go-along participants.

Our research findings aligned with those of other studies into women's use of public space (for example, Plan International 2018; Valentine 1980; Hart 1979), particularly that the threat of harassment or abuse can significantly impact on travel behaviour and where and when women travel.

Not all women are the same, so it's important to look through an intersectional lens to understand women's different experiences of safety. The go-along interviews gave insights into how different women may face additional roadblocks based on their age, ability, sexuality, cultural background, income, faith and where they live and work.

For Muhadissa, her identity as a Muslim woman wearing a headscarf sometimes makes her feel highly visible and unsafe, especially in areas that aren't as multicultural as Merrylands. When asked how her parents feel about her transport choices, she answered: "Yes definitely, they worry about me ... they worry they [other people] can attack me ... pull my scarf ... beat me or all of this kind of stuff."

Sasha, a proud Aboriginal woman, spoke about how when she wears shirts and symbols that celebrate her culture, her visibility can sometimes affect how safe or welcome she feels when travelling in Sydney. Similarly, when she walks through places that celebrate Aboriginal heritage and culture through flags, murals, signs that share the story of Country, or the names of Aboriginal people remembered through the names of streets and places, she's more likely to walk at a more relaxed pace and feel welcome and at ease.

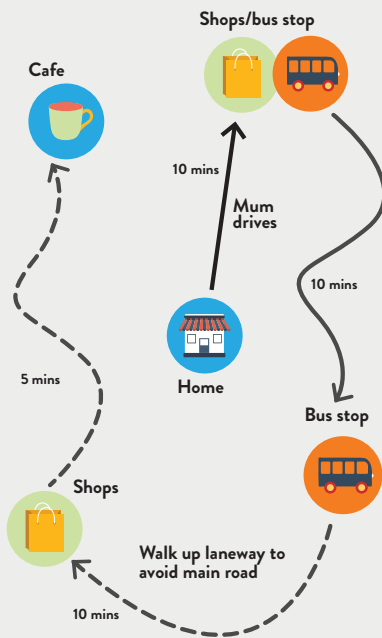
For Rikki, who has an intellectual disability, her safety concerns have more to do with sensory overload caused by loud traffic, crowded footpaths and the threat of people bumping into her. Due to her cognitive deficit, this can cause her to easily lose balance and fall, and she is unable to protect herself by putting out her hands. Avoiding loud, busy paths often means opting for quiet lanes, which can present other challenges in terms of car traffic, poor footpath conditions and lack of passive surveillance.



I DON'T FEEL SUPER COMFORTABLE WALKING FROM THE BUS STOP DOWN MY STREET ... LIKE I'M ALWAYS ON ALERT, I KNOW WHICH NAMES I WOULD SCREAM OUT BECAUSE I KNOW WHO LIVES IN THE NEARBY HOUSES

Women of Sydney: Talking about transport choices to increase comfort, confidence and safety

Total journey:
35 minutes
Car, bus and on foot



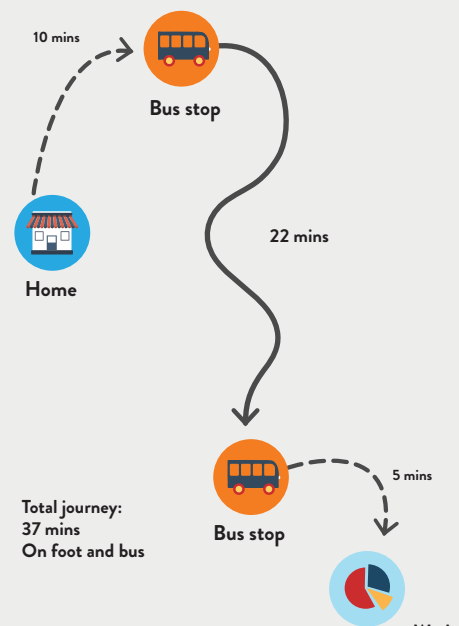
RIKKI (25) + SABRINA (20s) SENSORY SENSITIVITY + COMFORT

Rikki is a young woman with a sensory disability. When travelling with her carer, Sabrina, the two of them often use a combination of public transport, Uber rides and walking because Sabrina doesn't drive (partly due to concern for the environment). On our go-along trip, Rikki and Sabrina used a combination of being driven by Rikki's mum, walking and taking a bus to get to their destination, Rikki's favourite bookstore in the suburb of Glebe. The trip poses various challenges, from the risk of flashing business signage on busy Enmore Road (which could induce an epileptic fit), to a crowded and busy King Street (where Rikki fears being knocked over because she walks a little slowly) and bus drivers who aren't always patient and accommodating. To avoid loud, busy streets, Rikki and Sabrina often find themselves on adjacent laneways that also present dangers such as speeding cars or unmaintained footpaths.



SASHA (30s) CONNECTING TO COUNTRY

Sasha is an Aboriginal and African American woman and newcomer to Sydney. The unfamiliarity of place sometimes means she has a self-imposed curfew to avoid feeling unsafe when she's out too late, or she opts for more expensive modes of transport instead of catching public transport. As a proud Aboriginal woman, she often wears shirts and symbols to celebrate her culture, however this in itself can impact how safe or welcome she feels when travelling through Sydney. Similarly, when she walks through places that celebrate Aboriginal heritage and culture through flags, murals, signs that share the story of Country, or the names of Aboriginal people remembered through the names of streets and places, she's more likely to walk at a more relaxed pace, feel free to explore and a grow a deeper connection with her new home in Sydney.

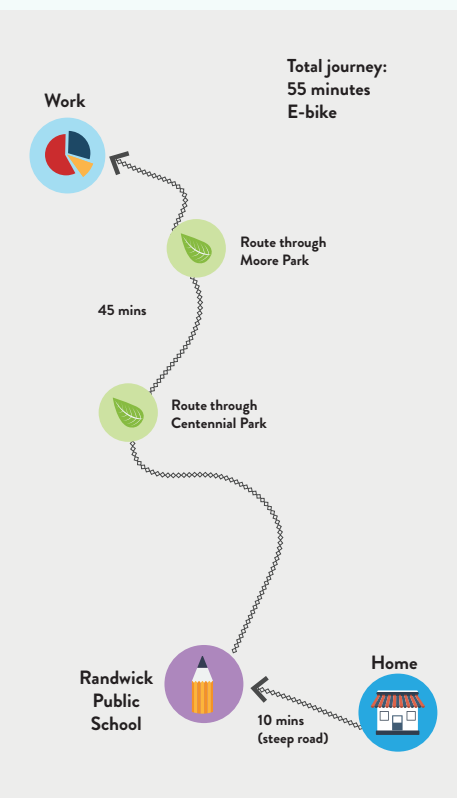
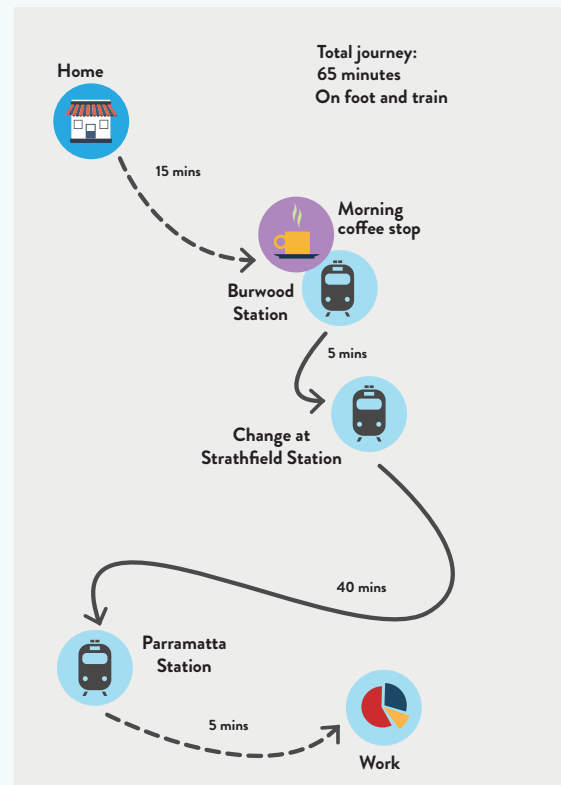


Women of Sydney: Talking about transport choices to increase comfort, confidence and safety



MONICA (30) CHOOSING ROUTES WITH ACTIVITY

Originally from the Blue Mountains, which is a car-dependent area, Monica is a public transport advocate. This is partly because she understands the detrimental effect of car emissions on the environment. Monica and her husband live in the Sydney suburb of Croydon, which means they can commute to work by train, although their walk to the station differs. She visits the Westfield shopping centre for a morning coffee and to enjoy the air conditioning on hot days. To get there, she walks beside busy shop fronts, benefitting from the passive surveillance. But her husband avoids this route, preferring one that is more peaceful. Both enjoy the walk as an opportunity to exercise and avoid the uncertainty that comes with bus routes.



LISA (46) + JESS (7) CAUTIOUS EVERYDAY RIDER

Lisa has never considered herself a cyclist, despite being a long-time rider. When she moved to Sydney and decided to ride to work (like she did in Melbourne), many people told her she shouldn't. Other people's bad experiences made her scared of riding on the roads, and she didn't trust her own experience. But she wanted to lower her emissions and felt that riding a bike was a practical solution. She thinks one of the key barriers to cycling in Sydney is drivers' attitudes to sharing the roads. In Melbourne, lines on the road are just a guideline, but Lisa said the mentality is different in Sydney, where drivers have a strong sense of road ownership. While cycling is not an easy choice in Sydney, Lisa thinks there is so much to enjoy, like the jacaranda trees and riding through Centennial Park. As a working mum, riding a bike also gives her the certainty that she will arrive on time for pick-ups because she doesn't get stuck in traffic on a bus or in a car.



Women value health and wellbeing benefits of active transport.

“It’s good for my health/fitness” was the most popular response for why women choose a bike as their primary mode of transport (91%). It was the second most popular response (66%) for walkers. When asked to describe people who choose walking or cycling as their main mode of transport, the most common descriptor was women who were fit, healthy and/or active (362 comments for riders, 285 comments for walkers).

Mental health benefits also emerged as a reason why the women surveyed use active transport. A total of 77% of women who said they rode a bike noted this as a reason why, although there wasn’t such a strong consensus among walkers, with 45% identifying mental health as a reason for walking. Several respondents to the question “how do you perceive a person who walks?” described walkers as calm and more relaxed. This perception demonstrates the positive health and wellbeing aspect of active transport, and why it was, and should continue to be, used in policy development as a reason to increase the number of women who walk and ride.

Access to active transport options is more than just about getting from point A to point D (stopping at B and C along the way). It can have a positive influence on overall wellbeing and quality of life through greater connections to community and place.

The connection to community and place emerged as a strong theme among women who walk and ride. Researchers observed during go-along interviews that when walking or cycling, it was possible to people-watch, stop and engage with nature, run fingers through plants and experience the built environment and nature in a way that’s not possible in a car and on public transport. During the go-along ride with Rebecca, a number of passersby waved or said hello to her. In addition to the known benefits of physical activity on mental health, this connection to nature, place and community adds significant value to why active transport must be a focus in placemaking and city planning.

Some women choose active transport because it is cost-effective.

A total of 52% of walkers and 82% of cyclists said the fact that both forms of transport are free was a key reason for choosing them. For go-along participant and international student Vera, this was a key factor behind why she walks to Town Hall Station from Redfern (20–30 minutes) instead of catching the train.

Most of the go-along rides were with women who owned an e-bike. These bikes make riding more viable and accessible for many women, including mums riding with their children and bags to school; those living in Sydney’s Western District, where the weather can be challenging; and those in Sydney’s Eastern District, which has some steep hills. However, the cost of these bikes, which can be equal to a small vehicle, present a significant challenge. During the surveys in Liverpool in the Western suburbs, one respondent spoke about how she used to ride to school; however, her bike was stolen and she was unable to replace it, limiting her ability to ride. Thinking about ways to reduce the upfront cost of a bike could increase riding by women.

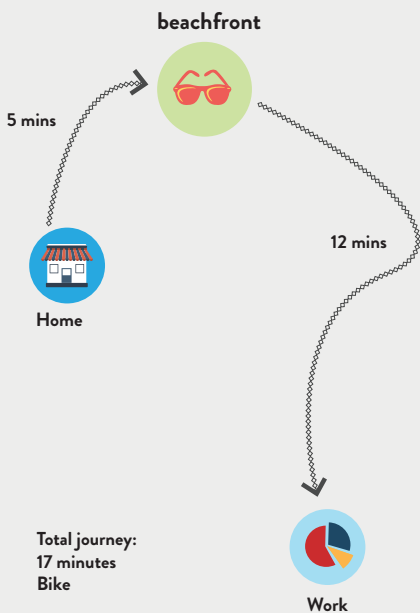


SO THE PART OF THE ROUTE THAT I REALLY LIKE IS THROUGH THE BUSHLAND AREA. IT’S REALLY BEAUTIFUL ... YOU’RE ONLY ON THE BIKE FOR ABOUT FIVE MINUTES ... AND IT’S LIKE A BUSHLAND CORRIDOR. BASICALLY, IT’S BEAUTIFUL NATIVE PLANTS, AND IT’S SHARED BY PEDESTRIANS AND CYCLISTS, AND THERE’S QUITE A FEW DOGS AS WELL. IT’S A LOVELY WAY TO START AND FINISH THE DAY.

Women of Sydney: Talking about the cost and health benefits of walking and riding

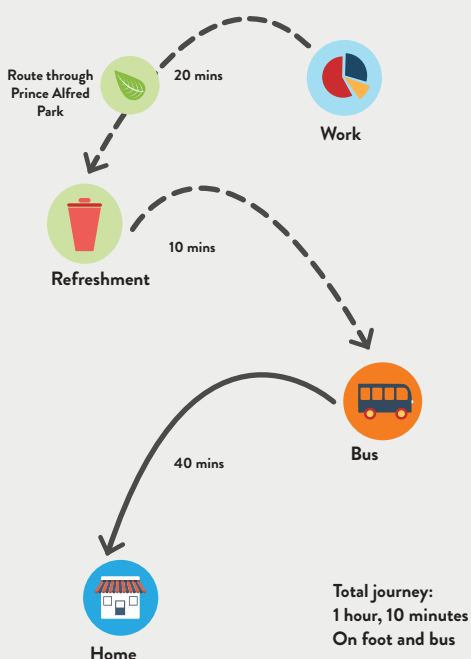
REBECCA (45) A TEACHER THAT RIDES

Rebecca has commuted on a bike for her entire adult life. Before moving to the Northern Beaches, she lived in the inner city, where she commuted to work on a road bike, equipped with gear for all weather conditions. Since having her son, she has adopted a 'safe yet cruisy' appearance to signal to both cars and cyclists that she is not in a hurry. She has made a keen effort to involve her son in bike riding and is proud to see him independently take on bike trails with his friends in the area. Until she discovered a shared path connecting her local cycle route to her work, Rebecca gave up riding altogether, believing that the only available route was along a busy main road. Now, when she rides to work, she enjoys beachfront views from a shared path as well as low-traffic roads. Aside from her wide handlebars and lack of lycra, Rebecca believes the abundance of bike signage on this route legitimises her place on the road.

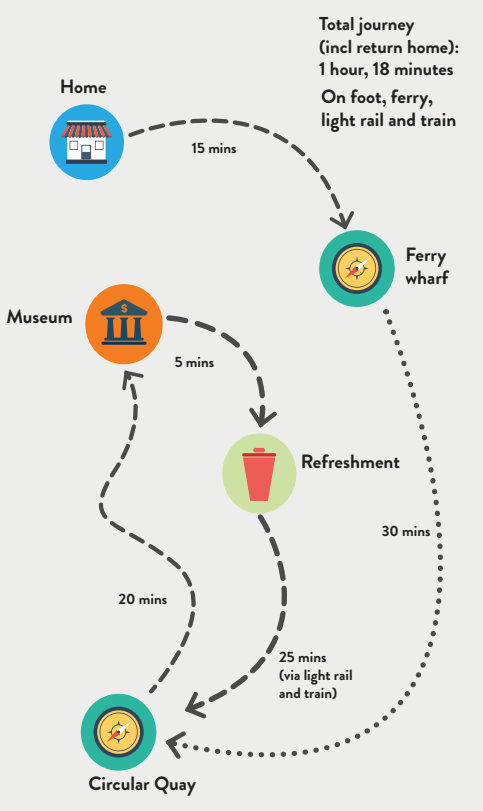


VERA (23) INTERNATIONAL STUDENT

She works in Redfern, an inner Sydney suburb, and has to catch a bus from Town Hall in the CBD. When she feels safe during the summer light, she takes the long walk to Town Hall, saving money and getting some exercise. Redfern's tree-lined residential streets are a pleasant part of her journey, offering shade from the hot sun. However, once she has passed Abercrombie Street and is walking through Prince Alfred Park, the lack of shade makes the walk a little less enjoyable and she speeds up. In winter, when it is dark, Vera doesn't walk, and pays for the train instead.



Women of Sydney: Talking about the cost and health benefits of walking and riding



ELLEN (59) + COLLEEN (86)
ENJOYABLE TRANSPORT EXPERIENCES

Neither Ellen nor her mother Colleen has a driver's licence. Ellen has never tried to get a licence because her commute to university and work was via ferry, and her friends and family live close by. Those close to her have mixed views on this choice, labelling her either a dependant or a 'financial genius'. Unlike Ellen, Colleen used to drive but has sold her car and now enlists her daughter to help plan trips on public transport. They chose the ferry rather than buses because the journey is far more enjoyable, involves fewer changes and takes less time. Ellen and Colleen frequently travel together, visiting art galleries and other cultural venues, shops and restaurants, both in the city and to see family in Watsons Bay in the Eastern Suburbs.



Go-along interviewee Amelia and interviewer April
 Photo source: Cred Consulting

APPENDIX 1

RESEARCH

APPROACH

Photo source: Cred Consulting



To understand how women travel across Greater Sydney, researchers applied a combination of three study methods:

- A survey was distributed online and in person at three intercept locations
- Eighteen go-along interviews were conducted with diverse participants.
- Researchers held a stakeholder workshop with planning, health and transport professionals, and members of walking and cycling community groups, to present key initial findings and co-develop policy responses.

1

WHAT DID WE WANT TO FIND OUT?

This research sought to identify:

- What types of trips women undertake including:
 - Purpose of the trip
 - Day and time
 - Distance, and
 - Number of stops along the way (if any).
- Whether these trips included walking or cycling
- What motivated women to make trips by walking or cycling
- What were the opportunities and barriers to walking and cycling for complex trip, and
- How do women perceive 'people who walk' and 'people who ride'?

To answer the above, researchers used the following qualitative and quantitative research methods.



ONLINE SURVEY

The survey was distributed online and shared on social media platforms.



INTERCEPT SURVEYS

Intercept surveys were conducted in three locations across Greater Sydney: Liverpool, Redfern and Rouse Hill.



GO-ALONG INTERVIEWS

Eighteen go-along interviews were conducted across Greater Sydney.



STAKEHOLDER WORKSHOP

A collaborative stakeholder workshop was held to co-develop policy, infrastructure and behaviour change responses and solutions.



Conducting intercept surveys at a Metro station in the North-West Sydney area

Photo source: Cred Consulting

2

QUANTITATIVE DATA

SURVEY DESIGN

The in-person and online survey asked women to focus on one typical journey they undertake over their week, encouraging them to think about a ‘complex’ journey that may involve multiple stops.

The survey posed questions about the journey’s purpose, duration and the modes of transport used. The survey branched, depending on the mode of transport selected for this journey. For women who walked or cycled, questions were asked to understand why and how often they walk or cycle, the factors they take into account when deciding on their route as well as anything they wish they could change or improve.

If walking or riding a bike wasn’t a main component of their journey, respondents were asked about barriers to riding or walking, as well as if they currently ride or walk for recreation.

The final section of the survey encouraged all participants to “describe a person who walks as their primary mode of transport” and to “describe a person who rides a bike as their primary mode of transport”. These questions sought to unpack how women perceive people who walk and ride, and to explore whether women see themselves in this description.

A series of demographic questions were asked to determine place of residence, household composition, income, language spoken at home, and if the respondent identified as a person with disability and/or an Aboriginal and Torres Strait Islander person.

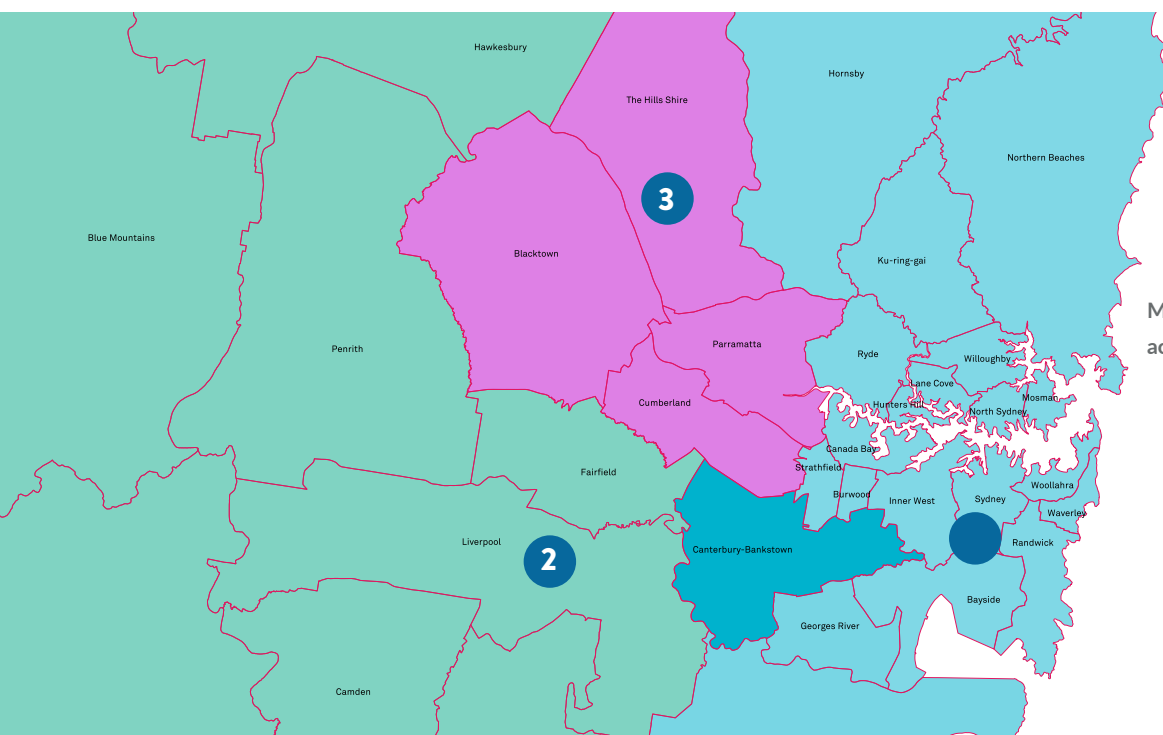
SURVEY DISTRIBUTION

The survey was distributed online via the City of Sydney’s and Liverpool City Council’s social media channels and through community groups, schools and in person at three locations across Greater Sydney.

The three in-person survey locations were selected based on factors including:

- demographic indicators of cultural diversity
- number of cars in households
- indicators of socio-economic disadvantage
- distribution across Greater Sydney – in line with the Eastern City, Central City and Western City framework
- diversity of urban typology (greenfield, inner-city or town centre)
- diversity of available transport infrastructure.

The three sites chosen were Redfern, an inner-city suburb with a major rail station in the Eastern City (1), Liverpool City Centre, an emerging centre of the Western City (2), and The Hills Shire sites of Rouse Hill, Kellyville and Castle Hill, suburban areas with a new Metro line in the North-West (3). These locations offer significant diversity (see map).



Map shows survey locations across Greater Sydney

WHO TOOK PART IN THE SURVEY?

A total of 889 women took part in the survey, including 565 who provided online responses. In-person interviews were conducted with 139 women in Redfern, 93 in Liverpool City Centre and 93 in The Hills Shire. Graph 1 shows that the majority of respondents (48%) came from the Eastern District. This is likely due to the online presence of the City of Sydney, and that cycling and walking advocacy groups are largely based in the inner suburbs of the Eastern District.

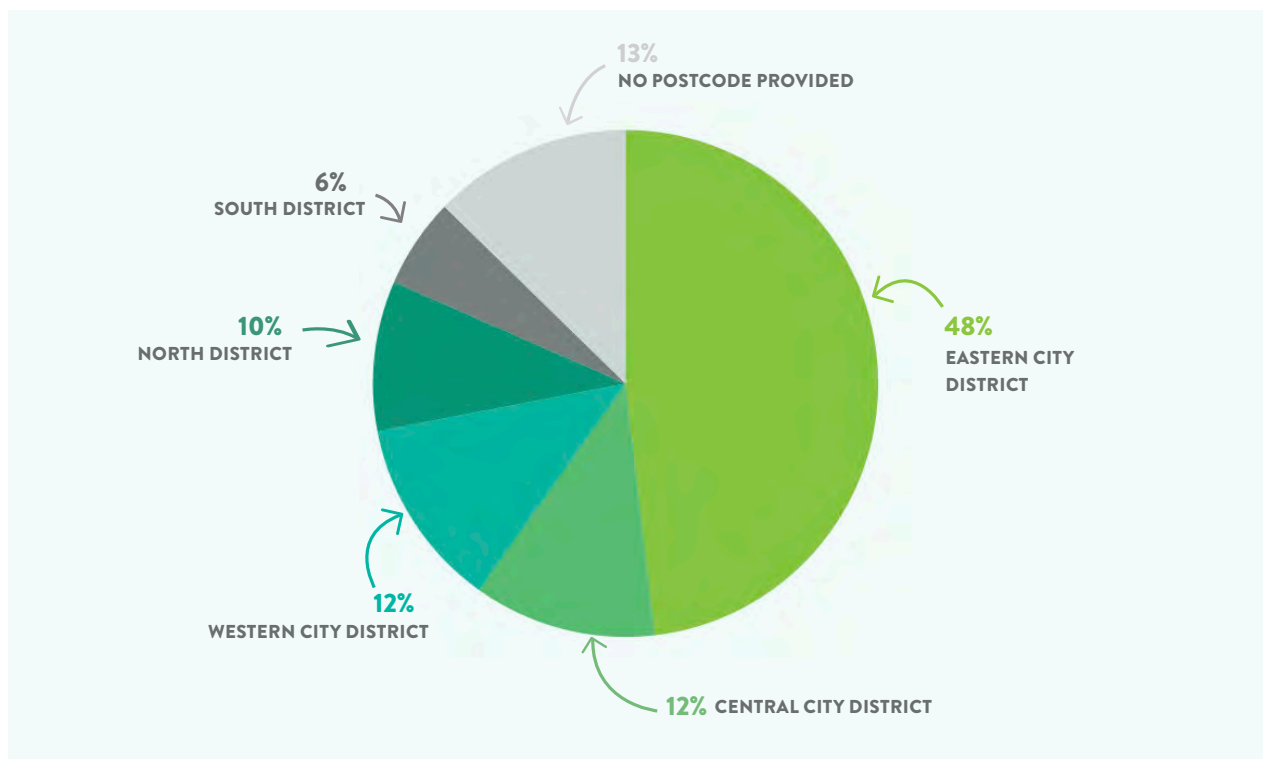
889 survey responses

565 ONLINE RESPONSES

139 REDFERN INTERCEPTS

93 LIVERPOOL INTERCEPTS

93 NORTH-WEST INTERCEPTS



Graph 1 — Postcode and district analysis of survey respondents



Intercept surveys
Photo source: Cred Consulting

3

GO-ALONG INTERVIEWS ACROSS GREATER SYDNEY

Because this study was grounded in the power of women to make change, it was important to apply feminist research approaches that acknowledge and value the importance of experience and storytelling. Qualitative data was collected via go-along interviews, where the interviewer accompanied the participant on an everyday journey that involved walking, riding a bike or another mode of transport.

The go-along method unpacks experiential knowledge of participants by tapping into their 'intuitive' knowledge. This knowledge isn't easily articulated, but is learnt through experience. It's the kind of knowledge that is constantly consciously or subconsciously drawn upon to interpret the environment, and it shapes our behaviour accordingly.

Go-along interviews are a hybrid between observation and interview, allowing researchers to be a part of participants' everyday spatial practices and behaviours while also observing their experiences and interpretations. Combining the observation of everyday activities with the respondent's reflections as revealed in interviews, the research is a combination of place discussion and observation – focusing on what is said, as well as what isn't. The go-along interviews required:

- getting agreement from each participant that a researcher could accompany them on a complex trip
- recording the conversation via a voice recorder and transcribing it for analysis
- making a spatial record of the route
- taking photos along the way, including portraits of the woman on her journey.

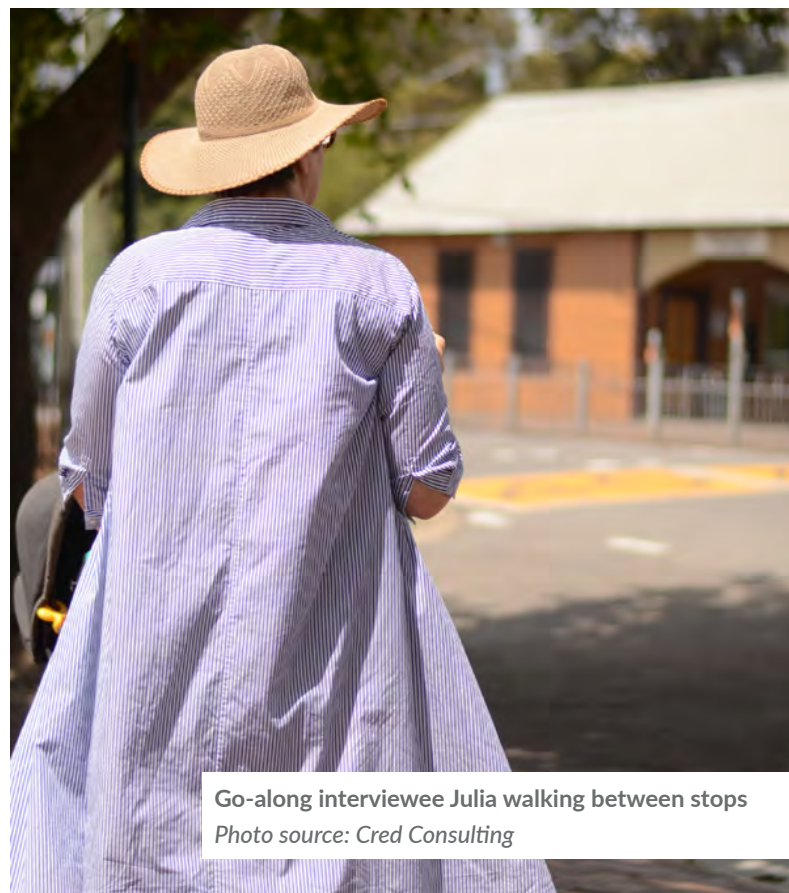
HOW WERE THE WOMEN SELECTED?

Non-probability purposeful sampling was used to select the 18 interview participants. As Palinkas et al. discuss, purposeful sampling is a technique widely used in qualitative research to identify and select "information-rich cases for the most effective use of limited resources" (2015, p534).

Purposeful sampling involves identifying and selecting individuals who are 'experts' in the chosen topic. They have relevant knowledge and experiences and are willing and able to communicate them (Bernard 2002; Spradley 1970).

Candidates were invited to participate based on their potential to provide insights into the everyday trips women make and any possible opportunities or challenges. This criteria included:

- gender (identifying as female)
- age group (varying)
- suburb of residence or workplace (to align broadly with intercept survey responses)
- country of birth (varying)
- sexuality (varying)
- ability (varying)
- has/doesn't have dependants
- socio-economic status (varying)
- achieving a balance between women who already walk or ride and those who don't.



Go-along interviewee Julia walking between stops
Photo source: Cred Consulting

4

STAKEHOLDER WORKSHOP

A two-hour stakeholder workshop was held with planning and transport professionals (representing local and state governments and the private sector), members of walking and cycling community groups, academics and health professionals. The purpose of the workshop was to co-develop and test strategies and recommendations, based on best-practice trends, case studies and the expertise of participants, about how cities can increase the number of women who walk and ride as part of their daily transport journey.

The preliminary survey and interview findings, coupled with women's stories about their walking and cycling experiences, provided a basis for discussing challenges and solutions. Workshop participants used a range of real-life scenarios told by the women who participated in the research to put themselves in these women's shoes to develop strategies and actions. In addition to responding to the lives of these women, the participants used a gender lens to address challenges faced by women.



A BIT 'ALTERNATIVE'

I'm a 35 year old working mum who lives in Kellyville. Since having my children, I've become more aware of my environmental footprint.

I do try to catch public transport, but by the time I walk my daughter to school, catch a bus to the Metro Station, change at Chatswood and get to work in the city, I've lost more than 4 hours of my day travelling.

I'm not sure I can continue my current transport modes of walking, bus, metro and train and am going to have to take up driving to the station to save time.

I've thought about riding a bike like I used to when I was younger, but I'm already considered to be a bit alternative for not driving a car and am worried about what people will think of me. There isn't a riding culture in the Hills, and on top of how I'll be perceived, I'm not sure how safe it would be.

What are some **INFRASTRUCTURE/FACILITIES**, **BEHAVIOUR CHANGE** and **POLICY/ADVOCACY** solutions that would help in this scenario?

Example of a scenario used in the stakeholder workshop.



Discussions at stakeholder workshop
Photo source: Cred Consulting

APPENDIX 2 RESEARCH FINDINGS



Photo source: Cred Consulting

1 HOW DO WOMEN TRAVEL AROUND SYDNEY?

This section focuses on the quantitative survey findings. The survey prompted women to think about the most complex journey they undertake during their week. It could involve multiple trips between home and their primary destination. The survey branched, depending on the respondent’s mode of transport, to understand more about their choice of transport.

WHAT TIME OF DAY DO THEY START THEIR JOURNEY?

The women surveyed were most likely to start their journey in the morning (8am–12pm: 36%). This was followed by early morning (before 8am: 29%). The least common response was journeys that began in the late evening (after 9pm: 2% or 13 respondents).

WHERE ARE THEY STARTING AND STOPPING THEIR JOURNEY?

The women were most likely to start their journey at home (73%) or work (23%) and finish their journey at work (43%), home (32%), place of study (10%) or the shops (4%). A total of 10% of respondents selected “other”.

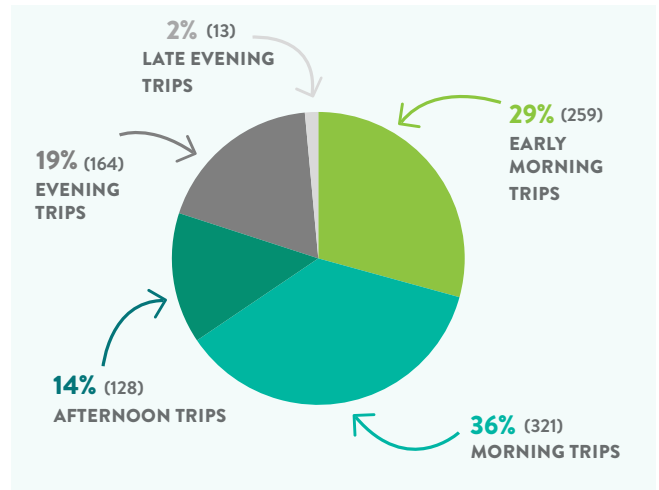
DO WOMEN MAKE COMPLEX TRIPS?

When asked “do you have to make any stops along the way?” 68% or 591 respondents answered “yes” and 32% or 276 answered “no”. As Graph 4 shows, the majority of journeys had one stop (54%), followed by two stops (30%). A total of 16% of respondents had three or more stops on their journey.

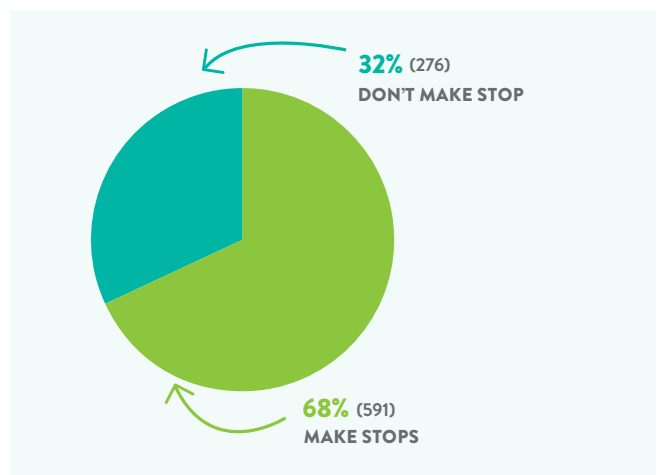
WHY DO THEY NEED TO STOP?

Respondents were asked an open-ended question, “why do you need to stop?” The most common reason was changing mode of transport (for example, parking the car to catch a train, or changing buses or trains because a direct service wasn’t available) (32% or 190). This was followed by picking up or dropping off kids from school or child care (28% or 167), doing shopping or groceries (26% or 154), exercising (11% or 63) or running miscellaneous errands (for example, picking up laundry) (5% or 35).

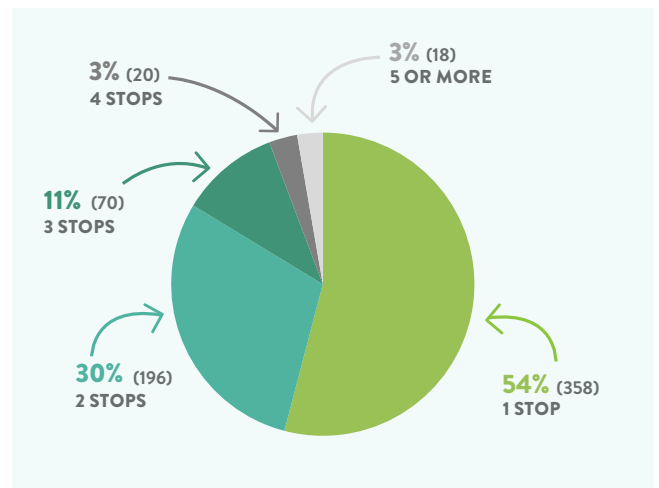
Graph 2 –What time do you start your journey?



Graph 3 –Do you have to stop on this journey?



Graph 4 –How many stops do you make?



WHAT MODE OF TRANSPORT ARE WOMEN TAKING?

Of the women who participated in the survey, respondents were most likely to use a combination of two or more transport modes, followed by public transport. Respondents were least likely to walk only (8%) or ride a bike only (10%). A total of 16% only use a car for their most complex journeys.

HOW LONG ARE WOMEN TRAVELLING?

The majority of survey respondents' trips took more than 45 minutes (54% or 477), followed by 31-45 minutes (23% or 199). Trips were least likely to take less than 10 minutes, with only 1% (seven respondents) recording such short trips.

HOW DO WOMEN'S TRANSPORT CHOICES CHANGE DEPENDING ON LOCATION?

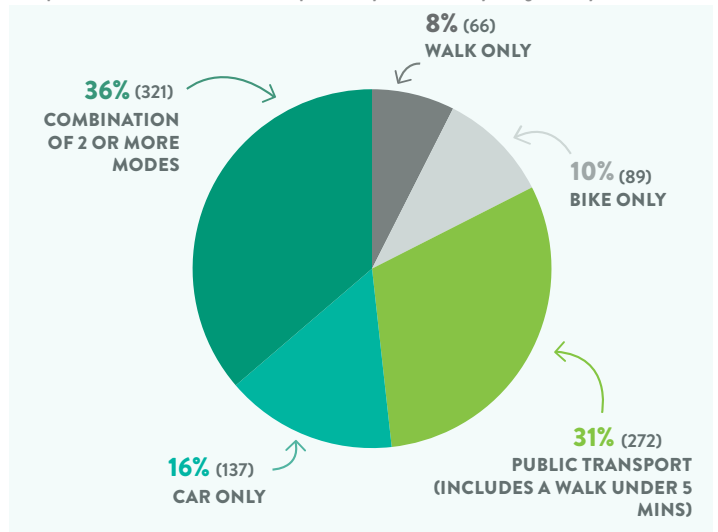
Graph 7 and Graph 8 sort the responses into the five districts set out by the Greater Sydney Commission. This data is exploratory (it should not be used to draw a picture of how all women in those districts travel) and reveals the challenge of collecting place-based data from such a large geographical area. Further targeted data collection by district would provide more accurate insights; however, resources were not available for a larger study.

DOES MODE OF TRANSPORT AND TIME CHANGE DEPENDING ON PLACE?

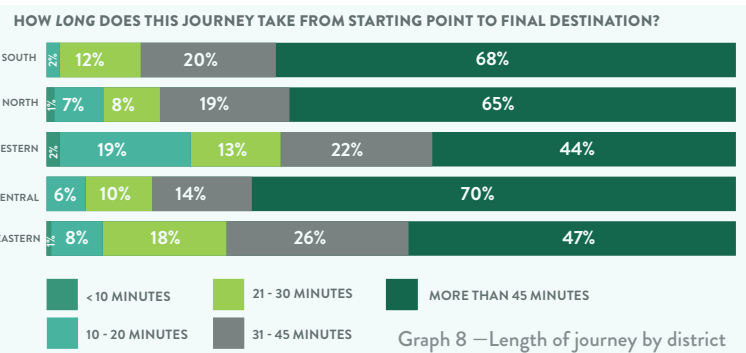
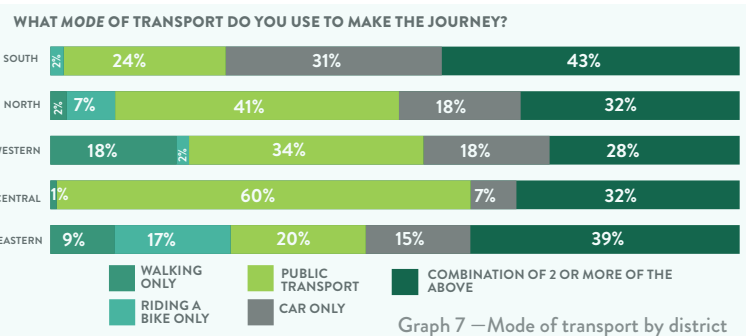
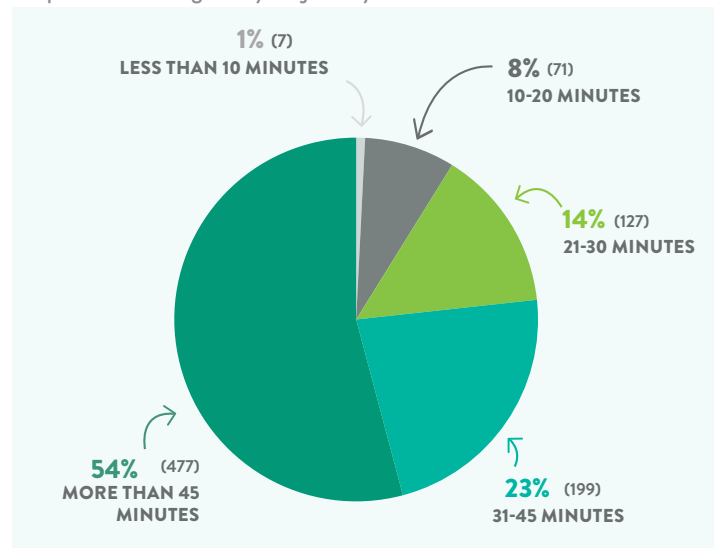
Graph 7 shows that the Western District had the highest proportion of walkers (18% or 20). This was probably skewed by the intercept surveys completed in Liverpool City Centre, a high-density area with shops, services and amenities accessible within its core. The Eastern however had the highest number of walkers (9% or 40), and the highest proportion of journeys undertaken by bike only (17%). The Central District had the highest proportion of public transport users (60% or 63), while the South District had the highest proportion of respondents who drive only (31% or 16).

Graph 8 shows that the Western District has the highest proportion of trips that take less than 30 minutes (33% or 36). Again, this is most likely skewed by the Liverpool City Centre intercepts and cannot be used to draw assumptions about travel in the Western District. The Eastern District had the highest number of trips under 30 minutes (26% or 112). The district with the highest proportion of trips taking more than 45 minutes was the Central District (70% or 73), closely followed by South (67% or 34) and North (65% or 55).

Graph 5 —What mode of transport do you use for your journey?



Graph 6 —How long does your journey take?



2 FINDINGS FROM WOMEN WHO WALK

This section presents findings for women who responded that their most complex trip includes ‘walking only’ as the mode of transport. This represents 66 of the 889 respondents.

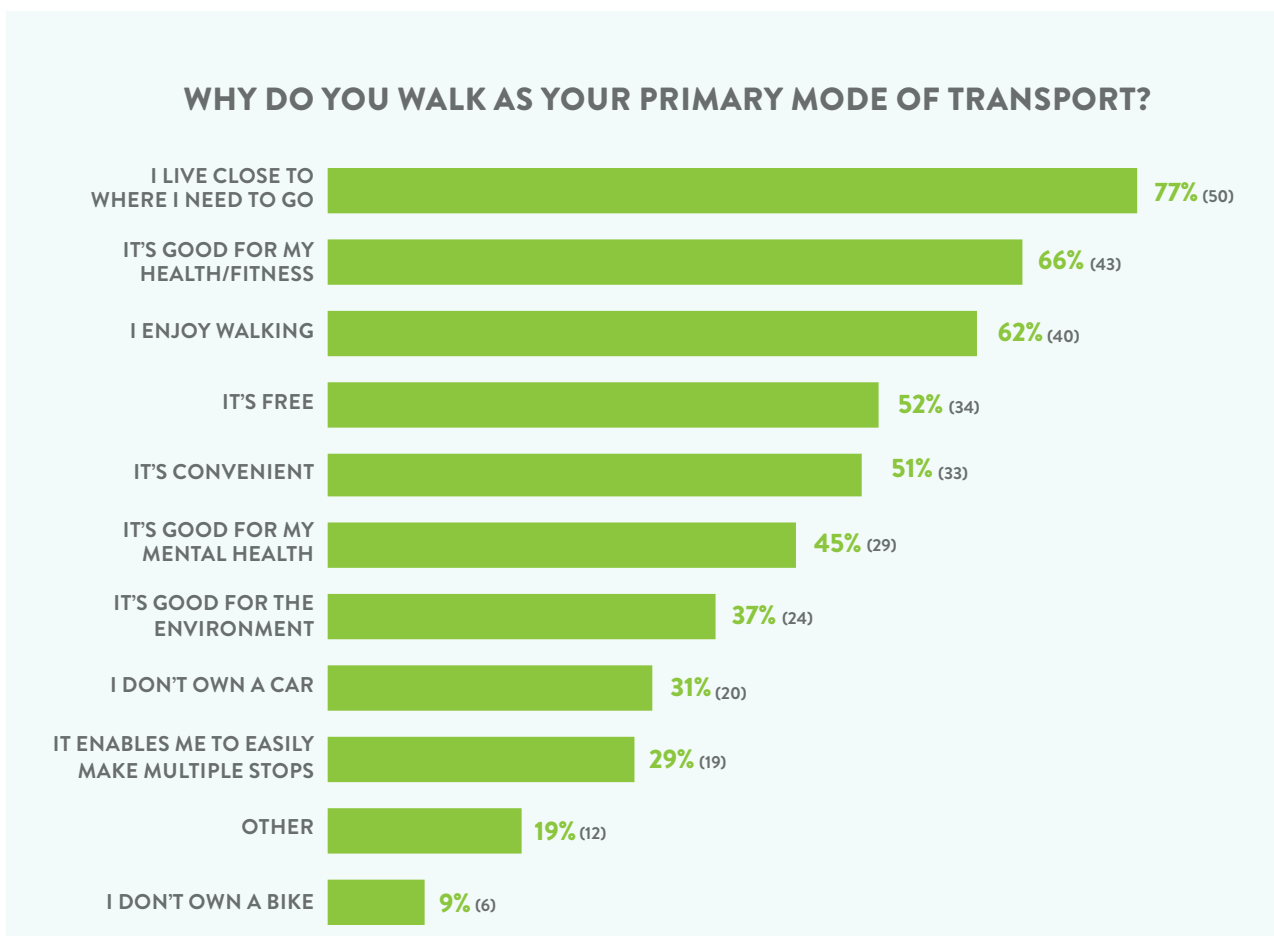
WHY DO WOMEN WALK?

As Graph 9 shows, living in close proximity to their destination was the most common reason women choose to walk (77% or 50 respondents), followed by it being good for health and fitness (66% or 43) and enjoying walking (62% or 40). A total of 19% or 12 respondents selected “other”, which included comments about how walking was quicker than catching a bus; it being a great way to connect with where they live and with nature; and when wheeling a pram, it’s easier to walk than use public transport.

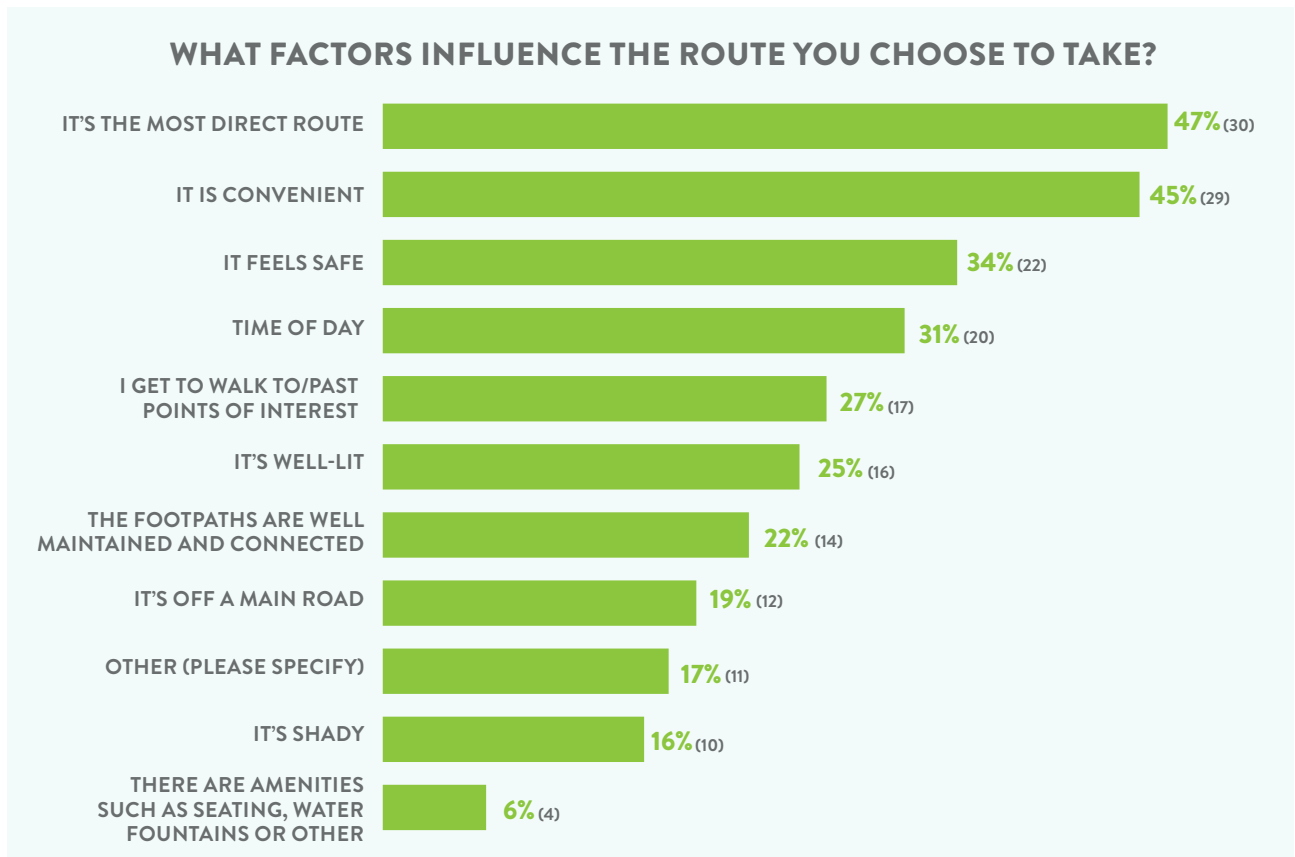
FACTORS THAT INFLUENCE ROUTES

The results in Graph 10 (see next page) present the findings for women who walk who answered the question “what factors influence the route you take?” Routes that are most direct were the most popular (47% or 30 respondents), closely followed by convenience (45% or 29) and safety (34% or 22). Other considerations that could also be linked to concerns for safety include time of day (31% or 20) and if it’s well lit (25% or 16).

A total of 17% or 11 respondents selected “other”. The comments detailed how personal safety influenced route selection. One comment noted that the woman avoided walking when tradesmen were finishing work (around 3pm) because she experienced increased catcalling. Multiple comments noted that women changed routes at night. Some comments said the role of nature and views influenced their route, with some preferring to walk through parks and near water, even if it was not the most direct path.



Graph 9 –Reasons for walking as a primary mode of transport



Graph 10 –What factors influence the route you choose to take (walking)?

THINGS THEY WOULD LIKE TO CHANGE ABOUT THEIR JOURNEY

When asked if there was anything they would like to change about their journey, concerns over psychological and physical safety was the strongest theme (15 comments). These comments included concerns for personal safety and fear of harassment or abuse, as well as multiple comments that reference children’s safety in relation to busy roads and traffic. Other popular responses were the desire to improve footpaths that had uneven paving or tree roots (5), accessibility for wheelchairs and prams (7), and to increase shade (3).

“**PEDESTRIAN SIGNAL TIMING IS AWFUL. ALSO DRIVERS ALMOST NEVER YIELD TO PEDESTRIANS SO SAFELY CROSSING THE STREETS IS ALWAYS AN ISSUE.**”



Photo source: Cred Consulting

3 FINDINGS FROM WOMEN WHO RIDE

This section focuses on findings from women who responded as riding a bike only for their most complex trip. This represents 89 of the 889 respondents.

WHY DO WOMEN RIDE A BIKE?

As Graph 11 shows, consideration of health and fitness was a major factor for women riders, with 91% or 77 respondents selecting this response. This was followed by enjoying cycling (87% or 66), and it being good for the environment and being free (both 82% or 70). A total of 44% or 37 respondents selected “other”, which included comments about how it’s a faster mode of transport (15 comments); public transport is unreliable or too crowded (8 comments); women enjoy riding with their children (six comments); and a lack of, or the expense of, car parking (five comments).

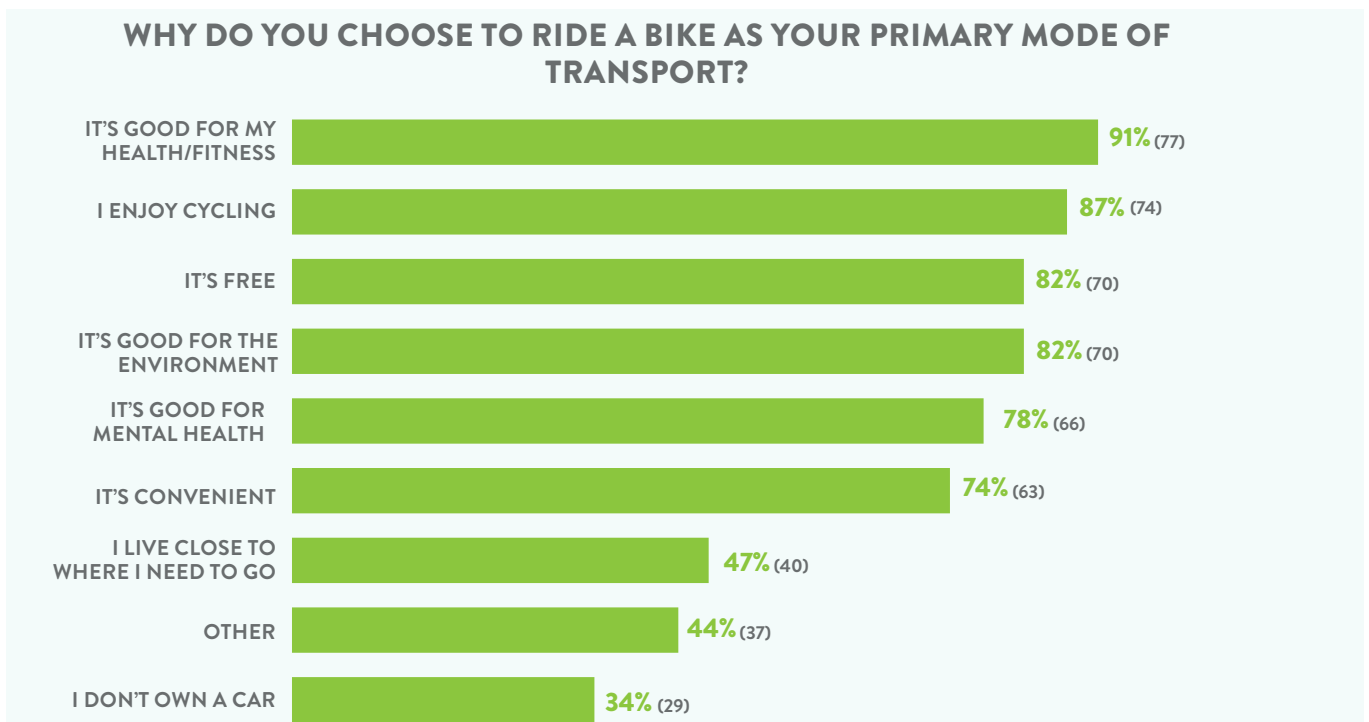
Compared to why women walk only, there were a lot more shared responses from those who ride a bike with stronger consensus. Concerns for the environment were also higher for women who ride a bike only than those who walk only.



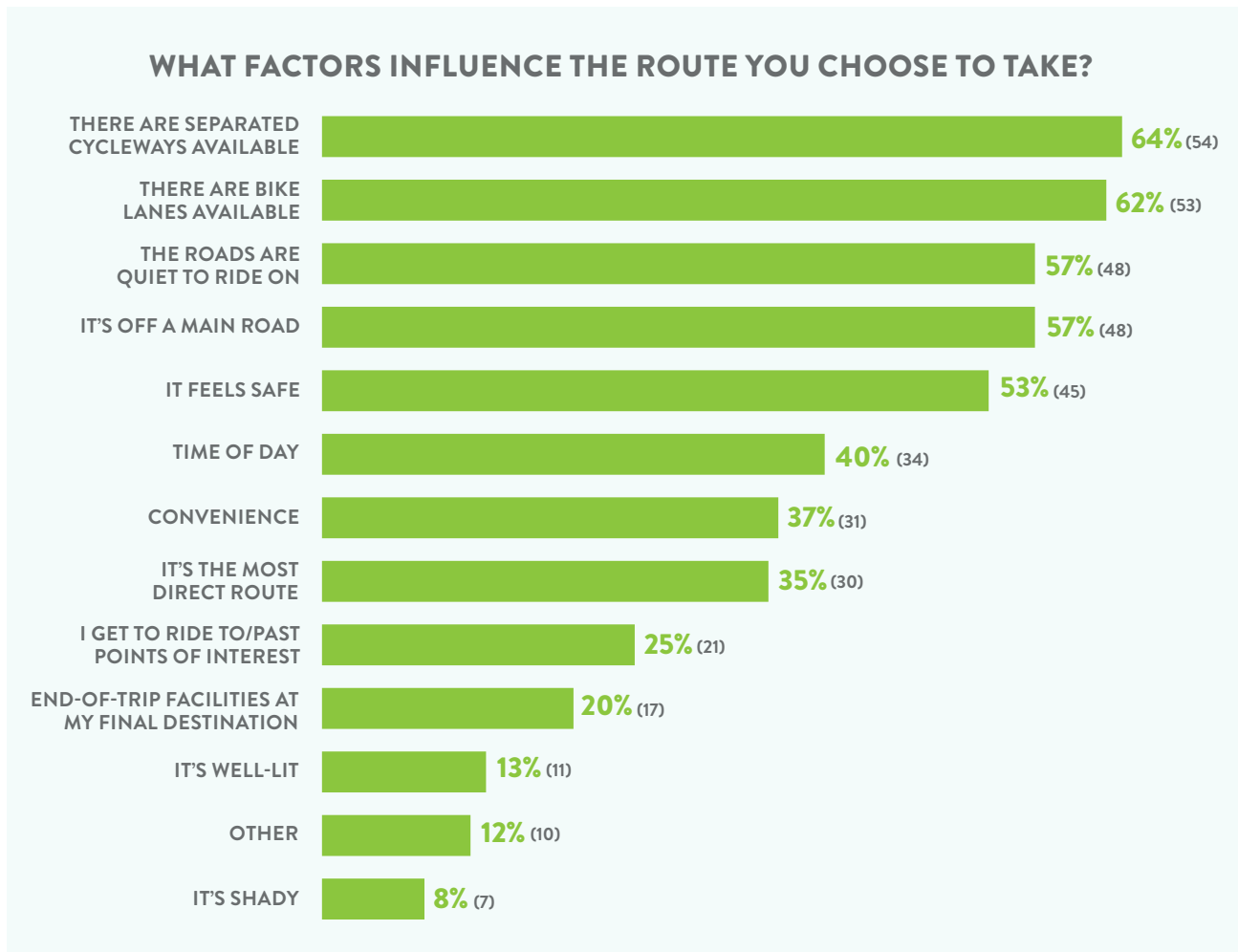
IF IT IS LIGHT, I CAN TAKE THE RECOMMENDED ROUTES OFF MAIN ROADS. HOWEVER, MANY OF THE RECOMMENDED CYCLE ROUTES ARE POORLY LIT AT NIGHT AND I FEEL UNSAFE. I THEREFORE OPT FOR THE BUSIER AND MORE DANGEROUS ROADS AT THIS TIME.

FACTORS THAT INFLUENCE RIDERS’ ROUTES

Graph 12 (see next page) shows the findings from the question “what factors influence the route you choose to take?” Traffic safety was the most likely factor respondents take into account, with separated cycleways being the most significant consideration (64% or 54 respondents), followed by bike lanes (62% or 53) and routes that are off a main road or quiet to ride on (both 57% or 48). Feeling safe and time of day were not as important, compared to women who walk. However, as one comment highlighted, fear of traffic and personal safety can overlap with women having to choose between feeling unsafe due to poor lighting, or traffic and dangerous roads.



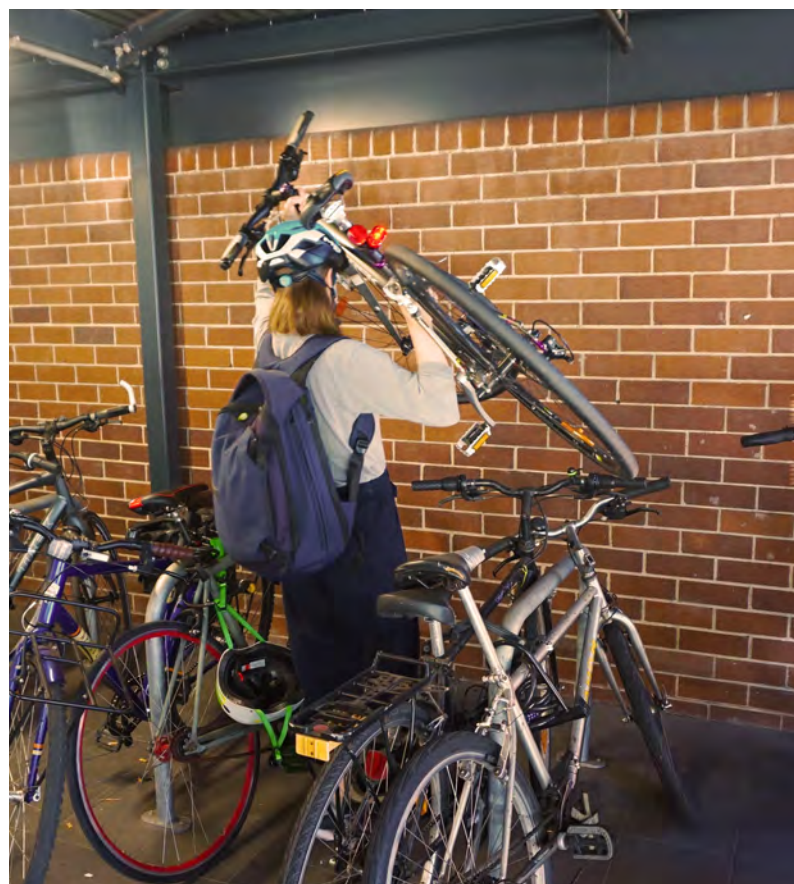
Graph 11 – Reasons for riding a bike as a primary mode of transport



Graph 12 –What factors influence the cycling route you choose to take?

THINGS THEY WOULD LIKE TO CHANGE ABOUT THEIR JOURNEY

When asked if there was anything they would like to change about their journey, improved cycling infrastructure was the strongest theme (56 comments). This included calls for more separated paths (32 comments); improved links (17 comments) because cycling infrastructure often suddenly ends; and improved surfaces (seven comments). Unlike walkers, riders were more concerned with traffic safety (23 comments), with many relating often daily near-death experiences due to traffic and driver behaviour. There were 11 comments calling for a culture shift among Sydney drivers so they are more accepting of cyclists. Other popular responses included the need for better traffic sequencing because sensors often don't pick up bikes, delaying the crossing of intersections or forcing cyclists to cross with pedestrians (10 comments). A total of 10 comments related to shared paths, with some calling for wider paths, and others stating there were no shared paths (two comments).



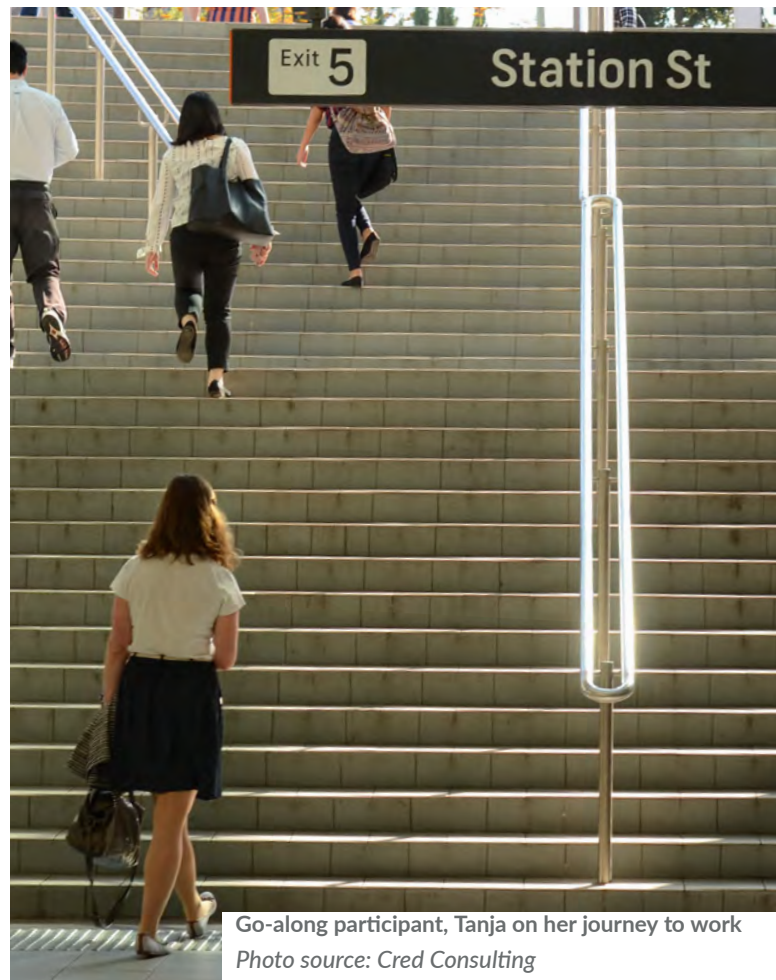
Go-along participant, Victoria stores her bike at Redfern Train Station
Photo source: Cred Consulting

4 FINDINGS FROM WOMEN WHO USE A COMBINATION OF TRANSPORT MODES

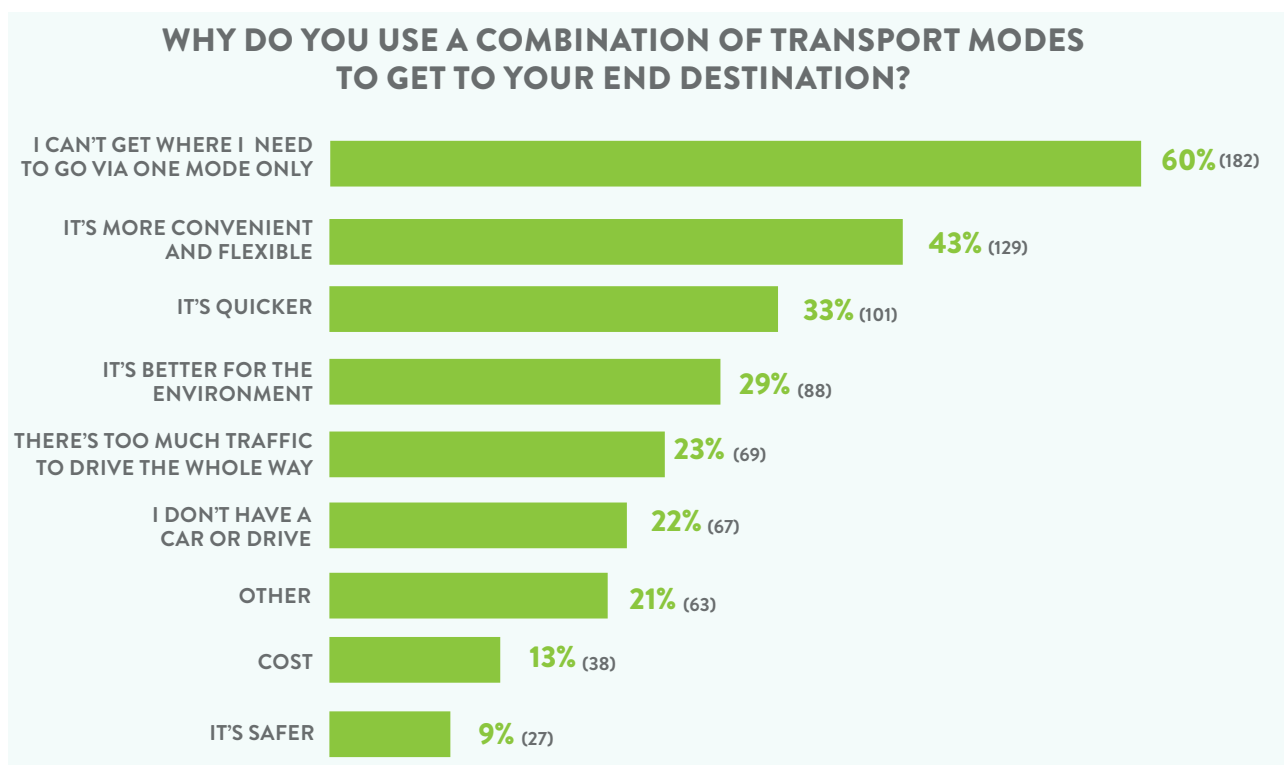
This section focuses on the findings from respondents who used a combination of transport modes for their most complex trip. They represented 321 of the 889 respondents. The most likely combination was public transport and walking, followed by public transport and driving. A total of 29% of journeys also involved riding a bike as a part of the overall trip.

WHY DO WOMEN CHOOSE A COMBINATION OF TRANSPORT MODES

As Graph 13 shows, the most popular reason women choose a combination of modes is because they can't get to where they need to go via one mode only (60% or 182 respondents), followed by it being more convenient and flexible (43% or 129) and it being faster (33% or 101). Safety was the lowest consideration, with 9% or 27 respondents stating this as the reason.



Go-along participant, Tanja on her journey to work
Photo source: Cred Consulting



Graph 13 —Reasons for using a combination of transport modes

5 WOMEN WHO CURRENTLY DON'T WALK OR RIDE AS PART OF THEIR JOURNEY

Women who don't walk or ride as part of their journey were asked questions about why not. These women represented 137 of the 889 respondents.

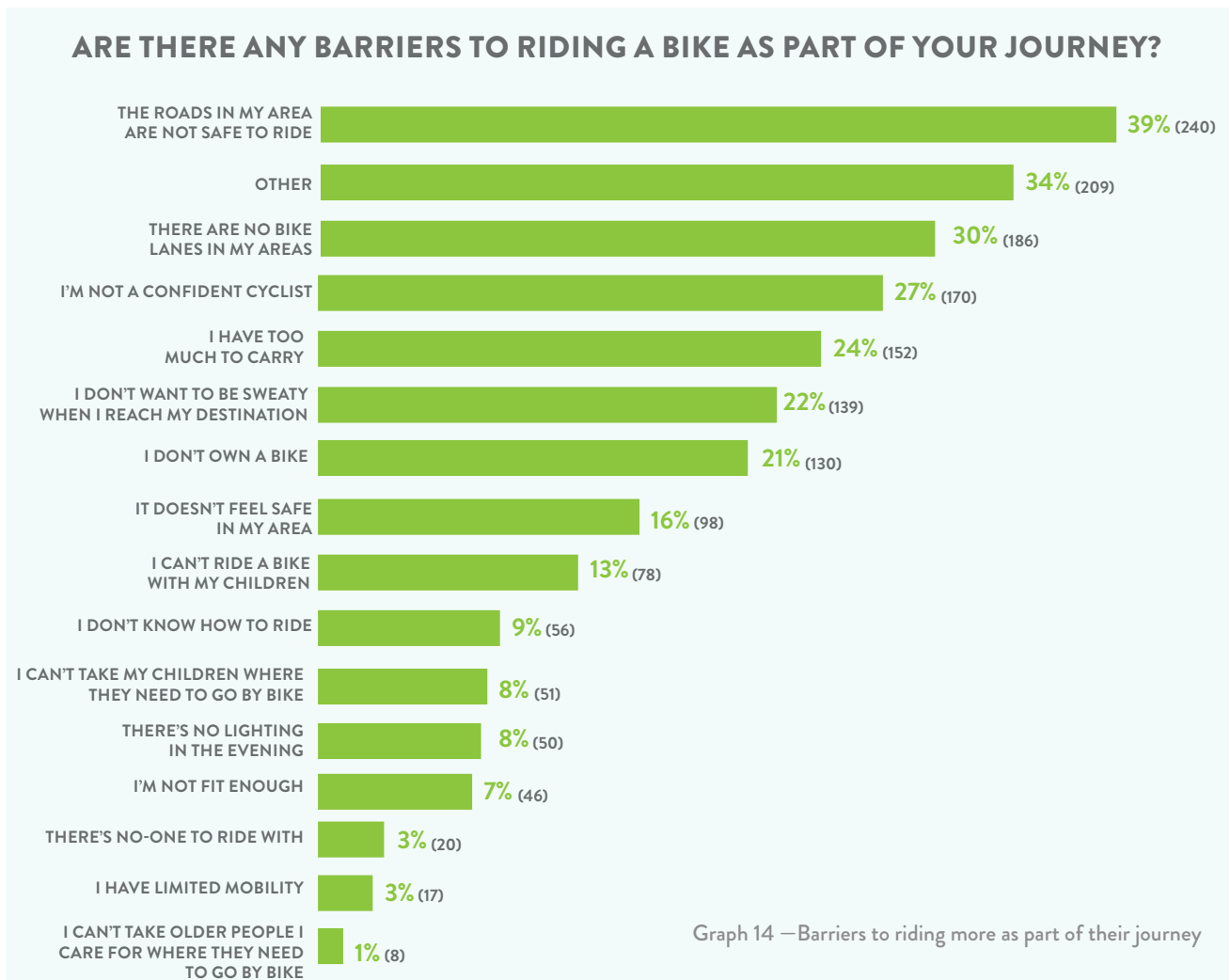
IDENTIFIED BARRIERS TO RIDING MORE AS PART OF THEIR JOURNEY

As Graph 14 shows, unsafe roads in their area was the most common reason why women didn't ride as part of their journey (39% or 240 respondents), as well as a lack of bike lanes (30% or 186). A total of 27% of respondents said they weren't confident on a bike, and 34% selected "other". Of these, the majority of comments referred to road safety (50 comments), including a lack of, or disconnected, cycle paths (21 comments); and fear of main roads, large vehicles and traffic (24 comments).

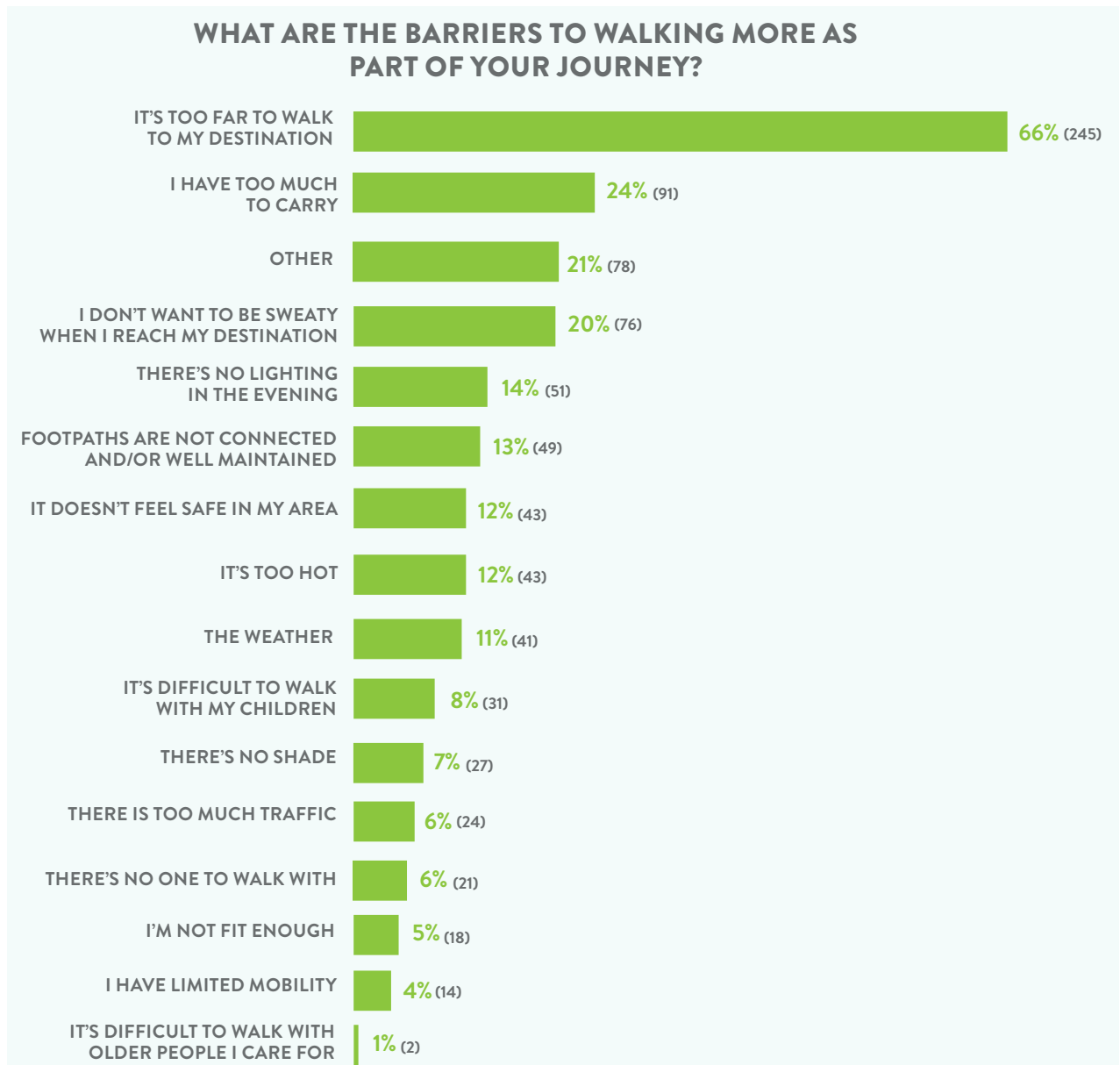
Another barrier was the destination being too far away (38 comments); sense of safety (both in traffic and personal safety, 19 comments); lack of secure bike storage or end-of-trip facilities (25 comments); Sydney's topography and hills (18 comments); and appearance, sweat, clothing or "helmet hair" (eight comments).

IDENTIFIED BARRIERS TO WALKING MORE AS PART OF THEIR JOURNEY

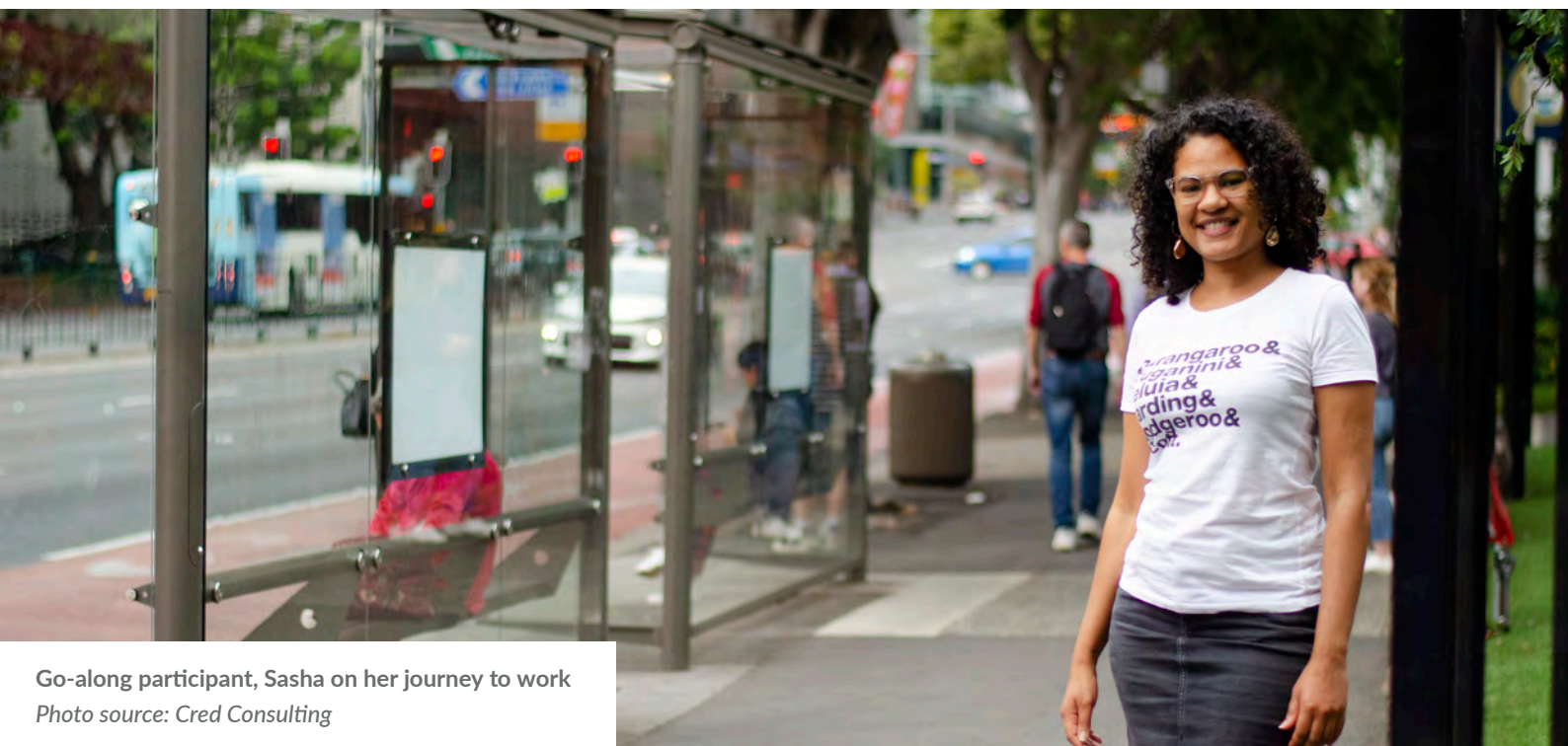
As Graph 15 shows (see next page), the most common reason why women didn't walk as part of their journey was the destination being too far away (66% or 245 respondents). Other common responses included having too much to carry (24% or 91). This was followed by "other", which included a variety of responses, such as lack of time or that walking took too long (18 comments); safety concerns, particularly at night (14 comments); public transport or driving was more convenient (13 comments); and caring responsibilities (six comments). Some respondents said they didn't want to be sweaty when reaching their destination (20% or 76), followed by lack of street lighting at night (14% or 51).



Graph 14 – Barriers to riding more as part of their journey



Graph 15 —Barriers to walking more as part of their journey



Go-along participant, Sasha on her journey to work
Photo source: Cred Consulting

6

DEVELOPING SOLUTIONS THROUGH A FEMALE LENS

The stakeholder workshop enabled a range of policy makers, community leaders, health advocates and practitioners, and academics to start a conversation about the ways we can improve access and increase the number of women who walk and ride a bike as their primary mode of transport. The identification of challenges and development of solutions were discussed through the frame of the three key outcome areas: behaviour change; infrastructure and facilities; and governance and policy.

IDENTIFIED CHALLENGES FOR WOMEN WALKING AND RIDING

Women's transport choices are influenced by challenges that include:

- lack of confidence or not feeling safe
- being the primary carer
- lack of integrated active transport infrastructure
- lack of available or low quality of end-of-trip facilities
- lack of policy integration across levels of government and departments within organisations
- general negative attitudes towards women walking and riding overlaid with longstanding societal and cultural expectations about how women should look, behave, act
- places and cities being designed for cars rather than bikes or walking
- heat (particularly in Western Sydney)
- governance, decision-making and program implementation don't take into account gender-specific challenges faced by women.

SOLUTIONS FOR GREATER SYDNEY AND BEYOND

BEHAVIOUR CHANGE:

- Introduce travel companion program to build the confidence of new walkers, riders and people with disability.
- Make it easier to plan walking and cycling routes (for example, using phone apps).
- Introduce women's walking buses, particularly at night, to increase feelings of safety and connection.
- Launch programs to educate the community about respectfully sharing transport spaces.
- Launch more women's cycling and walking groups like #FrocksonBikes and Ride like a Hippo NYC.

INFRASTRUCTURE AND FACILITIES:

- Plant more trees along walking and cycling routes.
- Introduce light-reflective footpaths, which increase safety and reduce heat.
- Connect walking and cycling paths to public transport stops/stations, and introduce bike storage.
- Build cycling 'superhighways' that connect Greater Sydney through local separated cycling and shared paths.
- Provide adequate seating and toilets in parks, public places and along cycling and walking routes.

POLICY AND GOVERNANCE :

- Subsidise walking and cycling equipment (such as shoes and e-bikes).
- Require that more spaces are prioritised in cities and places for pedestrians and cyclists over vehicles.
- Ensure that street design prioritises walking and cycling.

ACTIONS AND IDEAS ALREADY HAVING A POSITIVE IMPACT

The following are examples from around the world of policy, infrastructure and behaviour change programs that are making active transport more inclusive.

- **Nelson Street Cycleway** in Auckland, New Zealand – The cycleway was built to increase walking and cycling in the city. Some sections are shared with walkers, and its most famous part, Maori Te Ara I Whiti (or "Lightpath" or "Pink Path") is hot-pink and has mood lighting).
- **Superblocks in Barcelona, Spain** – The city has closed off groups of streets to traffic and introduced bench seats and more lighting, encouraging people to walk, and stop and sit.
- **Hottest Riders, Copenhagen** – This initiative is breaking down the stigma of sweaty lycra-wearing cyclists. It encourages people to get out and ride, breaking down the image of a cyclist and normalising riding a bike
- **Sharing the Space, Sydney** – The City of Sydney is running this education program about the importance of cars, cyclists and walkers sharing the space, to improve mutual respect.
- **Sydney Cycling Sisters** – This community-led group is providing a safe, fun and supportive environment for Muslim women who enjoy riding.
- **Public toilets in London** – Cafes and bars have been paid a subsidy to allow non-customers to use their toilets.

READING LIST

Brown, L and Durrheim, K 2009, 'Different Kinds of Knowing: Generating Qualitative Data Through Mobile Interviewing', *Qualitative Inquiry*, vol. 15, pp. 911-930.

C40 Cities 2018, *Women and biking: A case study on the use of San Francisco bike lanes*, Women4Climate. [Online]. <w4c.org/case-study/women-and-biking-casestudy-use-san-francisco-bike-lanes>.

Crenshaw, K 1991, 'Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color', *Stanford Law Review*, vol. 43, pp. 1241-1299.

Graglia, A 2016, 'Finding mobility: women, negotiation fear and violence in Mexico City's public transit system', *Gender, Place and Culture*, vol. 23, no. 5, pp. 624-640.

Hart, R 1979, *Children's experience of Place*, Irvington, New York.

Moller, S 2018 'Closing the gender gap in active transport' *The Fifth Estate* 16 April <www.thefifthestate.com.au>.

Palinkas, L, Horwitz, S and Green, C 2015, 'Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research', *Administration and Policy in Mental Health and Mental Health Services Research*, vol. 42, pp. 533-544.

Plan International 2018, '*Unsafe in the City, the everyday experiences of girls and young women*', accessed 22 October 2019, <www.plan.org.au/learn/who-we-are/blog/2018/10/11/unsafe-in-the-city>.

Perez, C 2019, *Invisible Women: Exposing Data Bias in a World Designed for Men*, Chatto & Windus, London.

Ricketts Hein, J, Evans, J and Jones, P 2008, 'Mobile methodologies: theory, technology and practice', *Geography Compass*, vol. 2, pp. 1266-1285.

Sandercock, L and Forsyth, A 2005, 'A gender agenda: new directions for planning theory', in S Fainstein, and J Servon (eds), *Gender and Planning: A Reader*, Rutgers University Press, New Brunswick, pp. 67-85.

United Nations 2018, *United Nations Population Division. World Urbanization Prospects: 2018 Revision*, accessed 24 February 2020. <www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects>.

Valentine, G 1989, 'The geography of women's fear', *Area* 21, vol. 4, pp. 385-390.

Valentine, G 2006, 'Theorizing and researching intersectionality: a challenge for feminist geography', *The Professional Geographer*, vol. 58, pp. 10-21.

Wang, C 1999, 'Photovoice: a participatory action research strategy applied to women's health', *Journal of Women's Health*, vol. 8, pp. 185-192.

Wesely, J and Gaarder, E 2004, 'The Gendered "Nature" of the Urban Outdoors: Women Negotiating Fear of Violence', *Gender and Society*, vol. 18, pp. 645-663.

Whitzman C, 2007, 'Stuck at the Front Door: Gender, Fear of Crime and the Challenge of Creating Safer Space', *Environment and Planning A: Economy and Space*, vol. 39, pp. 2715-2732.

Yon A and Nadimpalli S, 2017, 'Cities for whom? Re-examining identity, to reclaim the right to the city for women', *Australian Planner*, vol. 54, pp. 33-40.



w4c.org