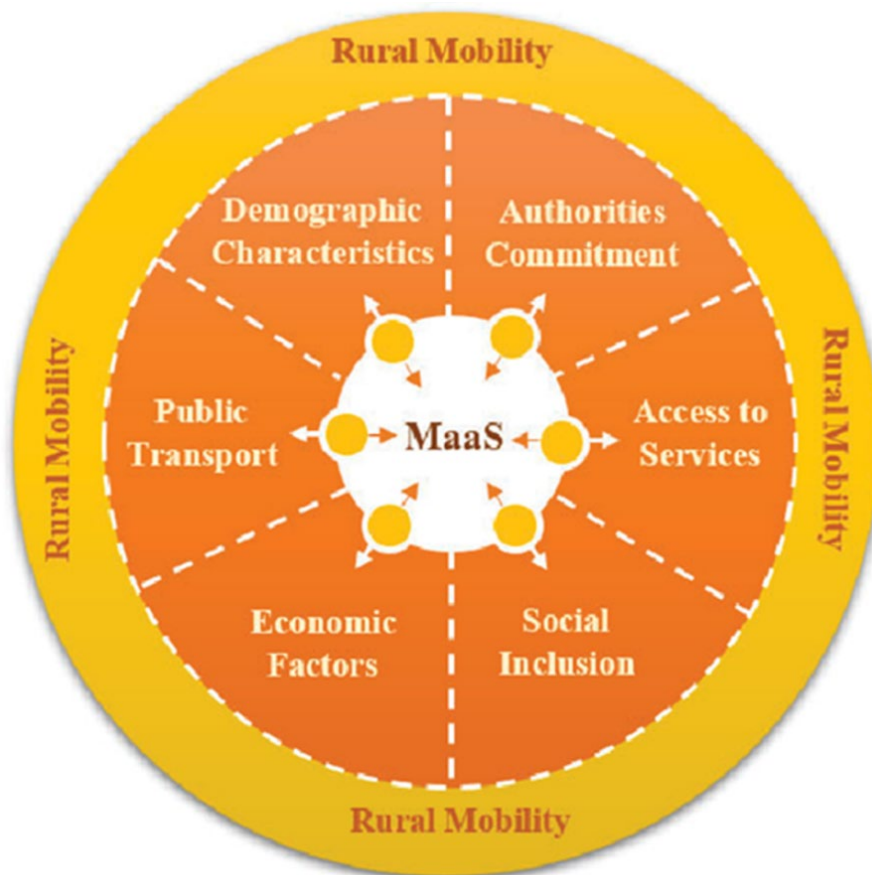


THE DESIGN AND ADMINISTRATION OF IN-DEPTH INTERVIEWS WITH KEY STAKEHOLDERS, AND SURVEYS WITH END USE PASSENGERS



FINAL REPORT – ANNEX 2

This report forms MS5 of iMOVE Project 3-020

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The design and administration of in-depth interviews with key stakeholders, and surveys with end use passengers

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Executive Summary

This report provides an update on the progress towards detailing the design and administration of in-depth interviews with key stakeholders and surveys with end-use passengers for Regional Town and Rural Hinterland (RTRH) MaaS in NSW. It builds on MS4 which comprised the building up of a detailed profile of the potential transport resource and mobility patterns of the population in each of the three locations chosen for detailed study (Nowra, Dubbo, and Coffs Harbour), described progress with stakeholder identification at each location, and updated the progress with data collection, specifically the development of materials for the in-depth interviews with key stakeholders.

This report describes the next stages of the work and is organised into two strands. The first strand details the administration of in-depth interviews with key stakeholders, including the refining and piloting of survey materials, and arrangements for the administration of interviews and approach to qualitative analysis. The second strand details the design and administration of end-user surveys. This comprises two parts: (i) end-user group discussions and a “pencil & paper” survey in Dubbo, Nowra, Coffs Harbour; and (ii) the NSW-wide online survey residents living in the 16 regional cities and their hinterlands. For each data collection exercise, the approach to analysis is discussed. The detailed outcomes of the analysis form the basis of the MS6 report.

Introduction

This report provides an update on the progress towards designing surveys and implementing data collection as part of Task 5 of iMOVE project 3-020. The previous milestone report MS4 of the project detailed progress in developing the multi-modal and multi-service blueprint for Regional Town and Rural Hinterland (RTRH) MaaS. The aim of the RTRH MaaS blueprint is to identify the features of the mobility framework relevant to Rural and Regional MaaS. This includes investigating how greater integration could be achieved between various mobility systems to better meet the needs of potential users. Importantly, RTRH MaaS should be seen as spatially diverse in order to recognise and deliver, as appropriate, mobility services beyond the boundary of a regional town.

Context and purpose of this report

The purpose of this report is to detail the primary data collection undertaken to inform the preparation of the RTRH MaaS blueprint.

This report comprises updates on progress on the two strands of work:

- The refining and piloting of survey materials, administration of in-depth interviews with key stakeholders at the selected three locations (Dubbo, Nowra, Coffs Harbour), and preliminary qualitative analysis.
- The design of end-user surveys, including end-user group discussions and a “pencil & paper” survey at the three locations, and the development of the NSW-wide online survey.

The *in-depth interviews* identify the specific features of the mobility framework that are relevant to RTRH MaaS from the service provider perspective. These include the role of rideshare and providers such as Uber to leverage their existing network, utilising both the digital and physical infrastructure. The Opal digital card is a potentially good fit for RTRH MaaS with it being used as an integrated ticket, which aligns with the recently announced Opal Digital trial. The current usage of technologies such as AVs (recently trialled in Coffs Harbour and Dubbo) and Apps are also relevant, but the overarching objective is to understand how MaaS might be an attractive way of enhancing mobility and delivering societal benefits. The in-depth interviews were conducted in the three locations selected by the project (Dubbo, Coffs Harbour, and Nowra), as detailed in the MS2 report, in July 2022. A summary of the profile of the three locations is provided in **Appendix A**.

Building on the insights gleaned from the in-depth interviews, *group discussions* were conducted with end users in the three locations with a view to gaining an understanding of users’ everyday travel needs and their likely interest in integrated mobility plans. This step was an adaptation methodology designed to give more granularity to the findings of the stakeholder interviews to further inform the NSW state-wide online survey.

The NSW-wide *online survey* targets respondents living in the 16 regional cities in NSW (based on the 16 Regional Cities Services Improvement Program to improve bus services)¹. The survey includes questions on respondents’ long-distance trips and short-distance trips (local travel) to better understand the potential services or travel modes that attract users most, together with stated preference (SP) choice games including both transport and other services designed for the respondents’ reported local travel.

¹ The cities in the Program are: Albury–Wodonga, Armidale, Bathurst, Canberra–Queanbeyan, Coffs Harbour, Dubbo, Grafton, Griffith, Lismore, Nowra – Bomaderry, Orange, Parkes, Port Macquarie, Tamworth, Tweed Heads, Wagga Wagga (see Figure B1).

Aims and purpose of the primary data collection

The three principal aims of the data collection to meet the requirements of developing the RTRH MaaS blueprint may be summarised as:

- to explore current transport needs and experiences among regional and rural dwellers in terms of how they access their surroundings, what constraints they face, and how to address barriers;
- to ascertain the nature and extent to which local travel can be facilitated and behaviour changed by better integration of different forms of transport and the availability and use of supporting technology; and
- to elicit switching behaviour potential under varying mobility subscription plans associated with different mobility services and non-mobility services in regional towns and their rural hinterlands.

The primary data collection process comprises two phases of collecting different data types with various samples, locations, and key output (see Table 1).

Table 1. Overview of primary data collection and aims

Phase	Data type	Sample	Location	Aimed key output
1	In-depth interviews with stakeholders	<ul style="list-style-type: none"> • Transport providers • Non-transport providers 	<ul style="list-style-type: none"> • Nowra • Dubbo • Coffs- Harbour • Sydney 	<ul style="list-style-type: none"> • Highlight complex mobility issues in RTRH • identify the mobility framework • capture perception of customer needs
2a	Group discussions with end users	<ul style="list-style-type: none"> • Drivers • Non-drivers 	<ul style="list-style-type: none"> • Nowra • Dubbo • Coffs- Harbour 	<ul style="list-style-type: none"> • Confirm barriers of stakeholders • Further insight into nature of issues of transport disadvantage and vulnerability • Implications for RTRH MaaS
2b	Online Survey with end users	<ul style="list-style-type: none"> • Drivers • Non-drivers 	<ul style="list-style-type: none"> • 16 Regional Cities 	<ul style="list-style-type: none"> • Explore new initiatives offering travellers more travel options for both short and long-distance trips • Elicit travellers' preference on different subscription plans with a set of travel options at discounted prices as well as other services

Structure of the Report

The report is organised as follows: The first main section discusses the administration of in-depth interviews with key stakeholders and offers preliminary insights. The next section describes the design and administration of the end-user surveys (discussion groups and online survey), and the third main section concludes this report and outlines the next stage of the project.

In-depth interviews

Aims and objectives

The in-depth interviews with service providers and organisers of transport were designed to gain insights about the services and products they provide and their potential fit within the blueprint for Rural and Regional MaaS, and how they could be leveraged through greater integration. Information was sought about how customers/clients currently access their surroundings, the constraints they face in terms of getting out and about, what role Government could play to improve things, and how travel behaviour could be facilitated/influenced by closer integration between various mobility systems (public transport, ride-share, private car ownership etc.), including by the use of technology.

Drafting of interview materials

Each interview included three major sections: Introduction, Stakeholder Experience, and Conclusion. Interviewees were asked to talk about their customer base, the services and products they provide, and their customers' mobility requirements (such as how their customers/clients currently move around their surroundings). The interview also explored the role of technology in enhancing mobility service provision (e.g., booking, payment, information searching, journey planning) and the potential for a MaaS-like subscription system. The challenges of implementing rural and regional MaaS (such as institutional and regulatory barriers) were explored and interviewees were asked for their views about where key responsibilities should lie in the setting up of Rural and Regional MaaS. The interview outline is given in Table 2. Survey materials were included in the MS4 Report.

Table 2. Interview outline (50-60 min)

Contents	Time
Introduction	5 min
Warm up	5 min
Getting to know your customers / clients	10 min
Mobility requirements of your customers / clients	10 min
The role of technology in enhancing mobility service provision	15 min
Implementing rural and regional MaaS	10 min
Conclusion	5 min

Method

Arrangements for administration of interviews

Following receipt of Ethics Committee approval, the in-depth interviews were conducted by CaPPRe (under contract to ITLS) in July 2022. The background to the process of stakeholder identification and the importance of gaining a good understanding of the stakeholders involved and their roles was described in the MS3 report. Taking the indicative list of stakeholder categories and related organisations that have been identified as important for the development of the blueprint, informal discussions were held with Community Transport operators and regional Transport for NSW officers in each of the three locations to better understand the key issues at each location and to generate a core list of stakeholder contacts to be used to initiate the in-depth stakeholder interviews (as further described in the MS4 report). The 17 interviewed stakeholders (see Table 3) included both non-transport providers such as government, peak bodies, health and Aboriginal organisations and transport providers from the bus, train and Community Transport sector and included a variety of levels of seniority.

Table 3. List of interviewees

No.	Gender	Work City	Position	Organisation Type
1	Male	Sydney	Transport Planning Manager	Non-Transport provider (NSW Government)
2	Female	Sydney	Senior Policy and Development Officer	Non-Transport provider (peak body)
3	Male	Nowra	CEO	Transport provider (CT)
4	Female	Dubbo	Peer Support Partner	Non-Transport provider (Federal Government carer support program)
5	Female	Dubbo	Manager	Non-Transport provider (Hospital)
6	Female	Nowra	Manager Commissioning and Planning	Non-Transport provider (NSW Government)
7	Female	Dubbo	Acting Operations Manager	Transport provider (CT)
8	Male	Dubbo	Manager of Business Services	Transport provider (bus operator)
9	Male	Dubbo	Managing Director	Transport provider (bus operator)
10	Male	Nowra	Customer Environment Manager	Transport provider (rail)
11	Female	Dubbo	Senior Manager	Non-Transport provider (NSW Government)
12	Male	Coffs Harbour	Assistant Service Delivery Manager	Transport provider (bus operator)
13	Female	Coffs Harbour	Senior Project Officer (Aboriginal affairs)	Non-Transport provider (NSW Government)
14	Female	Sydney	Marketing Manager	Transport provider (bus operator)
15	Female	Coffs Harbour	Operations Manager	Transport provider (CT)
16	Male	Coffs Harbour	CEO/Director	Non-Transport provider (First Nations not for profit corporation)
17	Female	Sydney	CEO	Transport provider (CT)

Qualitative analysis

Based on the in-depth interview data of key stakeholders, the qualitative analysis intends to:

- identify the features of the mobility framework that are relevant to RTRH MaaS such as the current transport services and current use of technology;
- identify the potential roles and capacities of stakeholders and how they may contribute to the MaaS value chain which is a key factor to develop MaaS services in rural areas (e.g. how services will be created and provided, and thus can facilitate the design of the RTRH MaaS blueprint)
- explore how stakeholders' customers currently access their surroundings, the constraints they face in terms of getting out and about, and barriers to meeting their travel needs;
- identify the barriers experienced by transport operators to meet customer needs;
- investigate what role government could play to improve transport in rural and regional areas, and how travel behaviour could be facilitated/influenced by closer integration between various mobility systems (public transport, ride-share, private car ownership, etc) and
- gain insights about the services and products provided and their fit within the RTRH MaaS blueprint, and how they could be leveraged through greater integration.

After receiving the transcripts of the in-depth interviews from CaPPRe on 5th August 2022, a qualitative analysis study has been undertaken with the facilitation of NVivo. The approach to analysis comprised both a descriptive analysis of the survey transcripts and a more structured analysis using the qualitative analysis framework.

The qualitative analysis framework is a matrix based analytical method which facilitates rigorous and transparent data management such that all stages involved in the analytical hierarchy can be

systematically conducted. Each transcript has a distinct thematic framework comprising a series of key themes, sub-divided by a succession of related sub-topics refined through cross-sectional labelling. Each main theme is displayed in its own matrix where every interviewer is allocated a row and each column denotes a separate sub-topic. Data from each case is then synthesised within the appropriate parts of the thematic framework. Preliminary analysis has used the NVivo12 qualitative data analysis software.

The steps of conducting qualitative analysis include:

- Define the research goals and objective
- Collect qualitative data (see Table 3)
- Analyse the data to generate initial topic codes (see Figure 1)
- Identify patterns or themes in the codes (see Figure 1)
- Review and revise codes based on initial analysis (see Figure 1)
- Organise and write up the findings

Name	Files	References	Created on	Created...	Modified on	Modified by
> <input type="radio"/> Attitudes to MaaS sponsors	7	18	24/9/2022, 8:43 pm	HX	Today, 3:21 pm	HX
> <input type="radio"/> Attraction of MaaS	11	36	24/9/2022, 8:17 pm	HX	26/9/2022, 5:28 pm	HX
> <input type="radio"/> Barriers for the disability	7	37	25/9/2022, 7:40 am	HX	26/9/2022, 5:28 pm	HX
> <input type="radio"/> Barriers of bus operators	5	11	27/9/2022, 9:15 am	HX	28/9/2022, 9:34 pm	HX
> <input type="radio"/> Barriers of community transport	12	82	25/9/2022, 8:22 pm	HX	30/9/2022, 9:51 pm	HX
> <input type="radio"/> Barriers of paying subscription fee	4	6	28/9/2022, 9:46 am	HX	1/10/2022, 11:45 am	HX
> <input type="radio"/> Barriers of Train operators	1	4	28/9/2022, 9:32 pm	HX	28/9/2022, 9:33 pm	HX
> <input type="radio"/> Barriers to meeting needs	17	118	23/9/2022, 9:48 am	HX	26/9/2022, 5:28 pm	HX
> <input type="radio"/> Barriers to one stop solution	16	56	23/9/2022, 6:46 pm	HX	26/9/2022, 5:28 pm	HX
> <input type="radio"/> Current transport services	15	77	23/9/2022, 7:29 am	HX	7/10/2022, 11:57 am	HX
> <input type="radio"/> Current use of technology	12	43	23/9/2022, 11:18 am	HX	26/9/2022, 5:29 pm	HX
> <input type="radio"/> Factors influencing the ability to meet needs	11	30	23/9/2022, 9:27 am	HX	Today, 3:20 pm	HX
> <input type="radio"/> Impact of disaster and COVID	5	17	24/9/2022, 9:50 am	HX	11/10/2022, 9:57 am	HX
> <input type="radio"/> Key considerations on RTRH MaaS	17	107	23/9/2022, 7:50 pm	HX	26/9/2022, 5:29 pm	HX
> <input type="radio"/> Means to know available services	8	12	24/9/2022, 7:25 pm	HX	26/9/2022, 5:30 pm	HX
> <input type="radio"/> Mobility requirements	11	39	23/9/2022, 7:30 am	HX	7/10/2022, 5:52 pm	HX
> <input type="radio"/> Payment methods	10	31	26/9/2022, 2:36 pm	HX	7/10/2022, 4:47 pm	HX
> <input type="radio"/> Response to AVs	6	8	23/9/2022, 11:26 am	HX	26/9/2022, 5:35 pm	HX
> <input type="radio"/> Response to MaaS	6	10	23/9/2022, 7:46 pm	HX	26/9/2022, 5:36 pm	HX
> <input type="radio"/> Role of government	15	98	23/9/2022, 7:30 am	HX	26/9/2022, 5:36 pm	HX
> <input type="radio"/> Role of interviewed stakeholders	13	65	25/9/2022, 8:13 am	HX	7/10/2022, 5:20 pm	HX
> <input type="radio"/> Suggestions on RTRH transport	16	73	25/9/2022, 9:08 am	HX	26/9/2022, 5:36 pm	HX
> <input type="radio"/> Transport in aboriginal communities	2	72	29/9/2022, 8:02 pm	HX	30/9/2022, 7:32 am	HX

Figure 1. An example of coding in quantitative analysis with NVivo 12

Discussion of outputs

The initial results of the qualitative analysis show that many people experience real challenges in meeting their mobility requirements due to the high level of transport disadvantage and other vulnerabilities and there is a gap between existing transport systems and the people who are most dependent on them. Distance makes a car a necessity while other transport modes offer unsatisfactory alternatives.

The initial findings highlight the varying perception amongst providers of their clients' needs (see Figure 2).

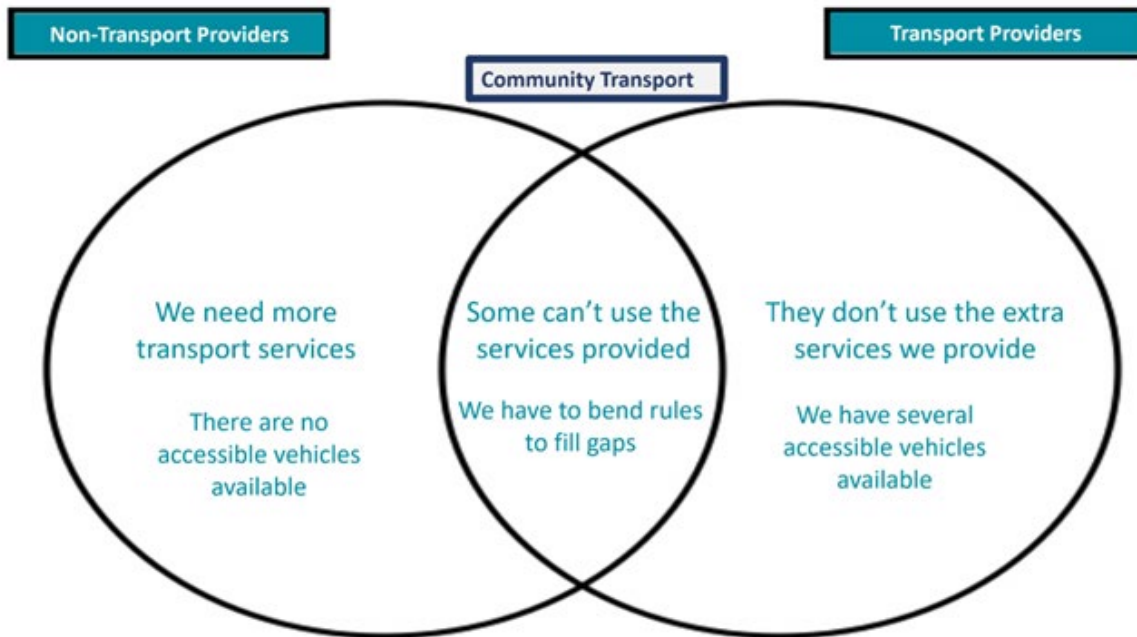


Figure 2. Varying perceptions of clients' needs

Using the coding procedure, the qualitative analysis identified 23 principal codes (see Figure 1) and a further 182 sub-codes. A matrix coding query was conducted between the interviewer's attribute "work city" and different codes to obtain the initial insights on the importance of various factors for different stakeholders in the three locations based on the number of references counted in each code. More detail of this will be provided in the report MS6. Figure 3 shows as an example, the attraction of MaaS for stakeholders in different locations; for example, the greatest attraction of MaaS mentioned by stakeholders in Dubbo is "Provide services during nonwork hours", followed by "Better connection through social inclusion", "Door-to-door services", "Make life easier", "Better access to medical services", respectively. The greatest attraction of MaaS mentioned by stakeholders in Coffs Harbour is "Connect client profile automatically through the APP", followed by "Solve first and last mile problem", "Make life easier". The greatest attraction of MaaS mentioned by stakeholders in Nowra is "Integration of systems", followed by "Better connection through social inclusion". "Make life easier" is the only attraction mentioned by stakeholders in three locations.

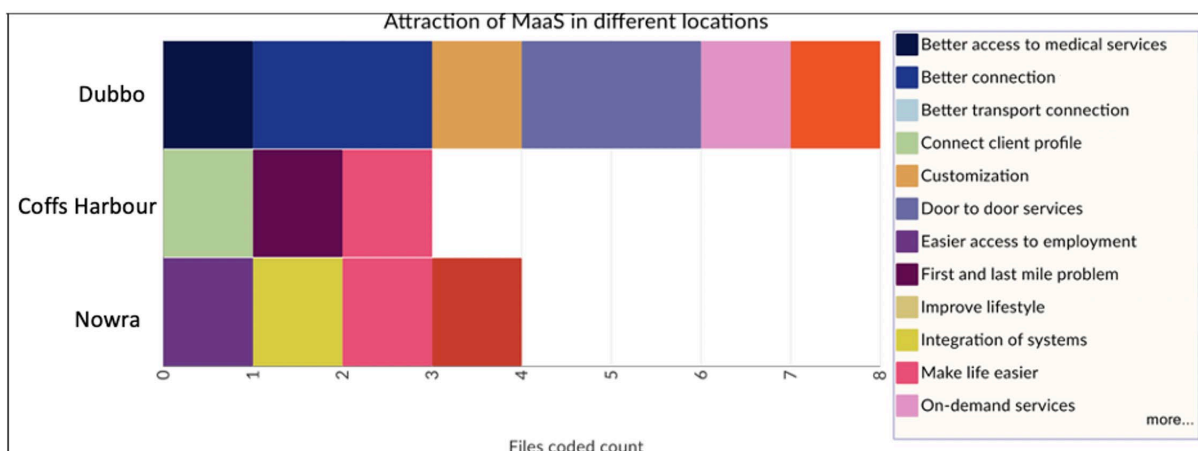


Figure 3. Attraction of MaaS in different locations

End-user surveys

The end-user survey includes group discussion with a "paper & pencil" survey in Dubbo, Coffs Harbour and Nowra and the development of the NSW state-wide online survey.

The initial results from the in-depth interviews described above have shown that many users experience transport disadvantage. Given the gap between existing transport systems and the mobility needs of users as well as the shortage of drivers due to the volunteer-dependent workforce there was a need to know more about the barriers to meeting users' needs and the extent to which local travel can be facilitated by better integration of different forms of transport.

Aims and objectives

The end user surveys were designed to collect information about the mobility requirements of citizens and their attitudes towards MaaS-like solutions. An overview of the scope of the end user surveys was given in Table 1.

A summary of the methods adopted and approach to analysis is given in Table 4.

Table 4. Summary of qualitative and quantitative study in analysing end-user survey

	Qualitative study	Quantitative study
Type of data	Group discussions of 6 groups with 45 participants in the selected 3 locations	Online survey of over 1000 respondents of NSW state-wide
How data is collected	Observations, interviews, and textual analysis	Measuring and counting things
How data is analysed	Text analysis; grouping data into meaningful themes or categories	Statistical analysis
Level of analysis	In-depth, local phenomena; more subjective	Large-scale, generalizable
Type of findings	Informative, understanding the why or how about stakeholders' barriers and attitudes towards RTRH MaaS	Elicit the probability of choosing different mobility plans and quantify the preference for different mobility services

Method

Qualitative study on end user group discussions

Group discussions with representatives of end users were conducted in Dubbo, Coffs Harbour and Nowra during which each participant was asked to finish a "paper & pencil" survey which explored issues of everyday travel and potential for bundling of different services. These were completed in August 2022. CaPPRe conducted 6 discussion groups after the pilot test of the survey (each group was recruited by a professional agency using a screening questionnaire) with 45 participants in Coffs Harbour, Dubbo, and Nowra, and each group comprised up to 9 participants for the 2-hour duration. Participant consent was sought at the start of each discussion group.

The discussion guide is provided in **Appendix C** and a copy of the survey is included as **Appendix D**. Each discussion group included a projective exercise to enhance the depth of insights. In the survey information was collected about trip purposes, current travel modes, payment methods, disability, walkability, booking methods, barriers to getting out, types of concession card, transport available in the living area, the easiest way to find transport, services people are interested in using if they are available in their areas, and suggested improvements.

Approach to analysis

The qualitative study emphasises "sense-making" or understanding the attitudes of different stakeholders and barriers to implementing Rural and Regional MaaS, rather than predicting or

explaining. A creative and investigative mindset is needed for qualitative analysis based on a participant-in-context attitude, and a set of analytic strategies.

Demographic information of 45 participants across 6 groups in the selected locations (Dubbo, Coffs Harbour, and Nowra) and characteristics of participants are summarized in Figure 4.

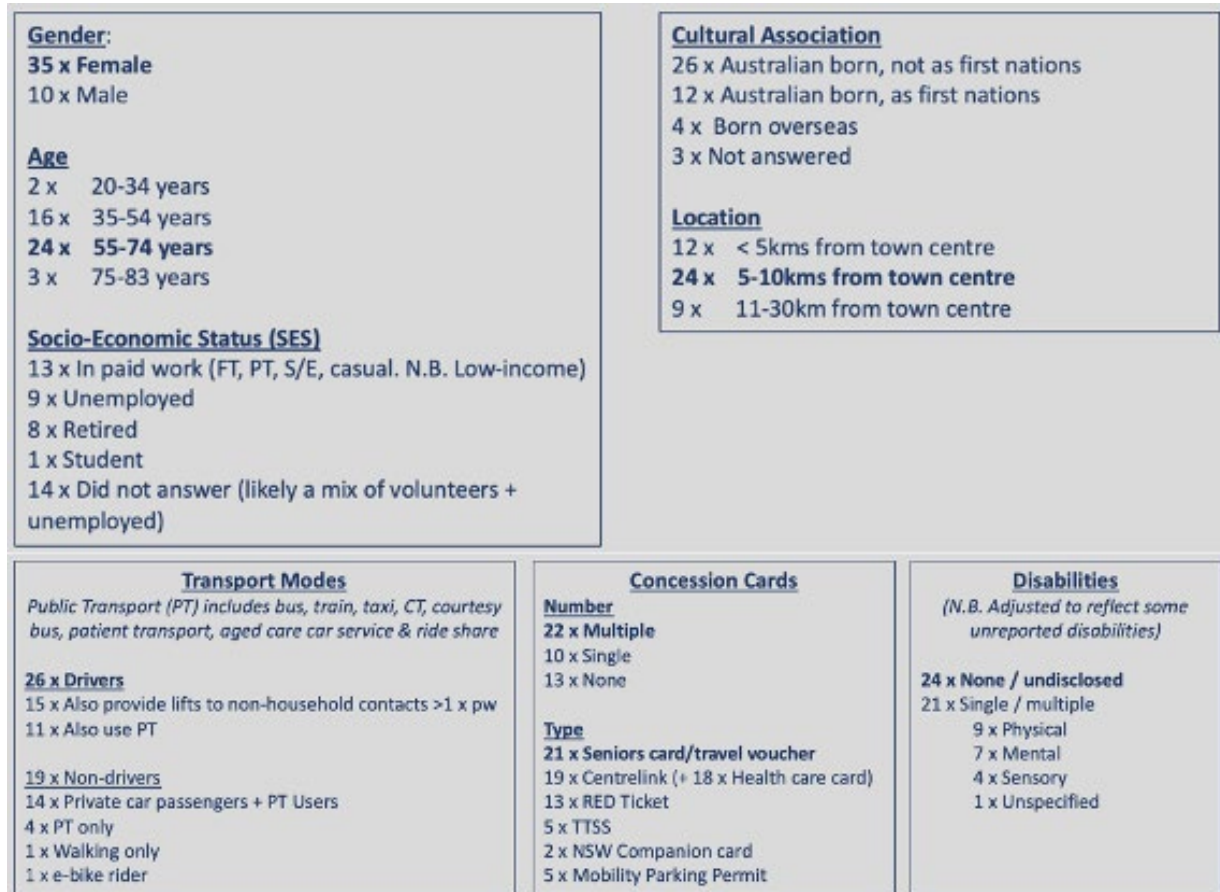


Figure 4. Demographics of 45 participants across 6 group discussions in the selected locations

The aims of the qualitative analysis of the group discussions may be summarised as: 1) to explore current transport needs and experiences among regional and rural dwellers in terms of how they access their surroundings, what constraints they face, and how to address barriers; and 2) to ascertain the nature and extent to which travel can be eased, and behaviour changed by better integration of different forms of transport and the availability and use of supporting technology.

The barriers for people to get around which emerged from the discussion groups are summarised in Figure 5.

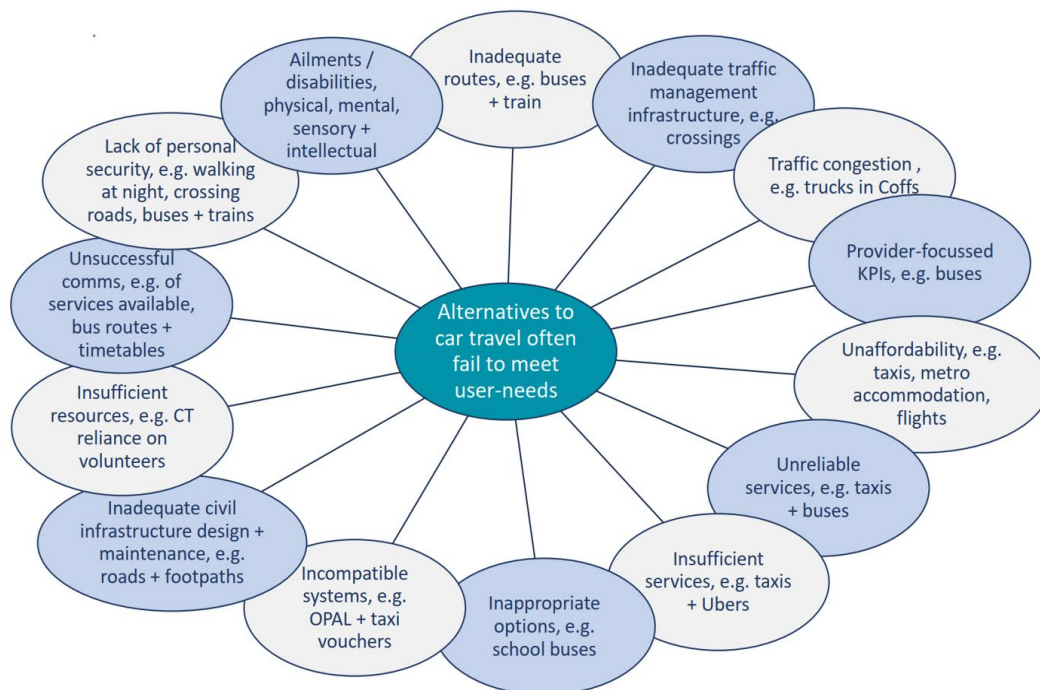


Figure 5. Barriers for people to get around

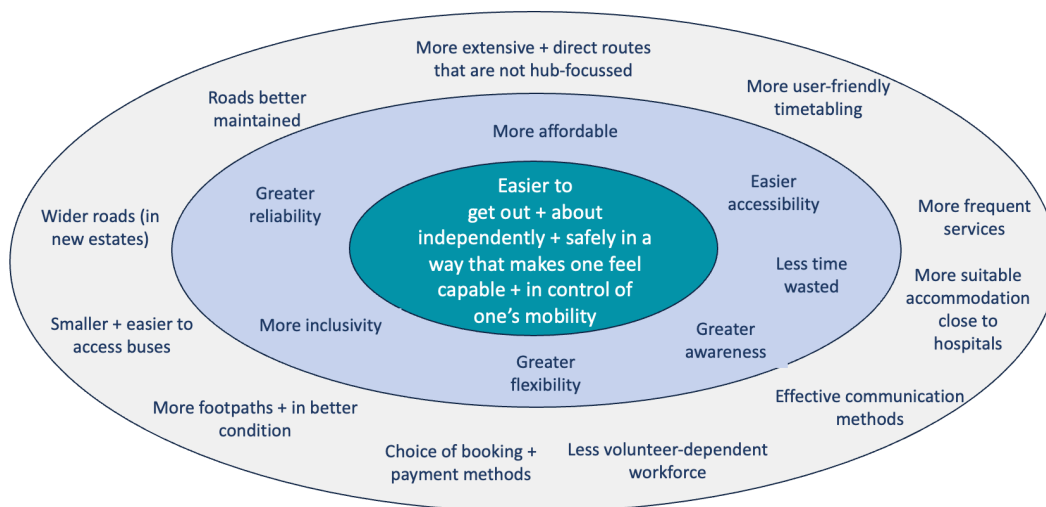


Figure 6. Three layers of unmet needs

Three layers of users' unmet needs have been identified (see Figure 6). The outer layer summarises the functional needs of users, such as more extensive and direct routes, better-maintained roads, easier-to-access buses, more footpaths in better condition, less volunteer-dependent workforce, more suitable accommodation close to hospitals, more frequent services, more user-friendly timetabling. The middle layer summarises users' social needs, such as more affordable, greater reliability, inclusivity, greater flexibility, greater awareness, less time wasted, and easier accessibility. The inner layer summarises the emotional needs of users, such as getting out independently and safely in a way that makes them feel capable.

In the group discussions, users were also asked to draw/describe their wishes for transport if they could wave a magic wand. Some examples are given in Figure 7. It is shown that users wish that MaaS could satisfy their functional needs (e.g., access to surroundings, accessibility of vehicles), social needs

(e.g., convenience to use mobility services), and emotional needs (e.g., feeling competent, relieved, and safe while getting out).

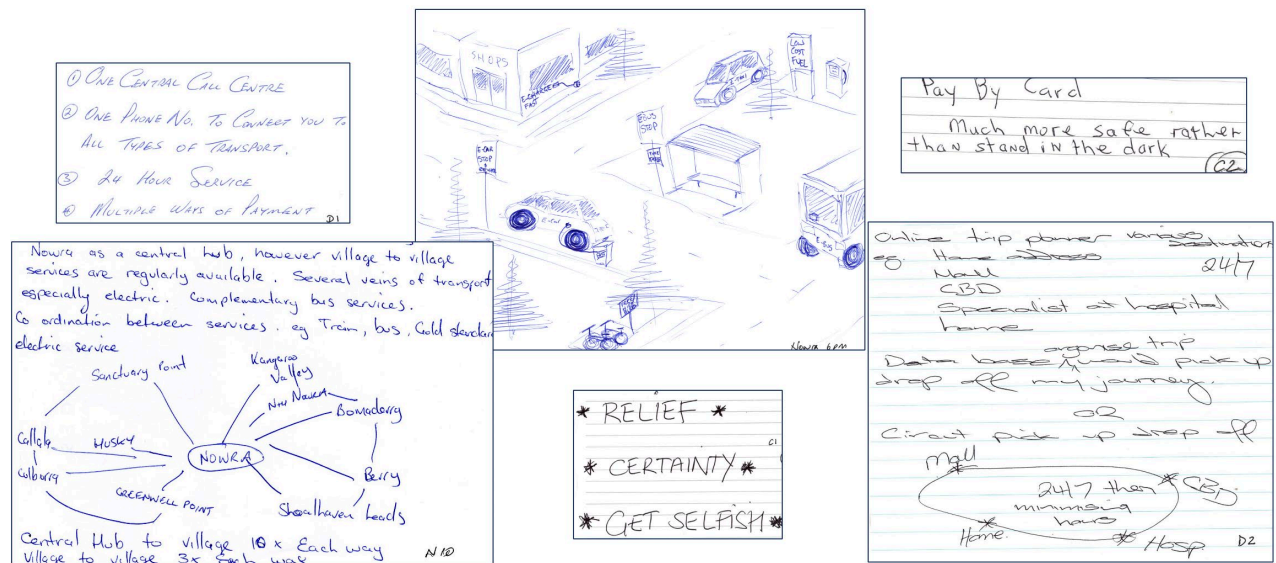


Figure 7. Examples of users' wishes on transport once MaaS was there

Transcripts of six discussion groups were imported into the software NVivo12, the initial themes of the qualitative analysis have been obtained, and the number of references corresponding to different themes is given in Figure 8. Further analysis is currently underway and will be reported in detail in the next report (MS6).

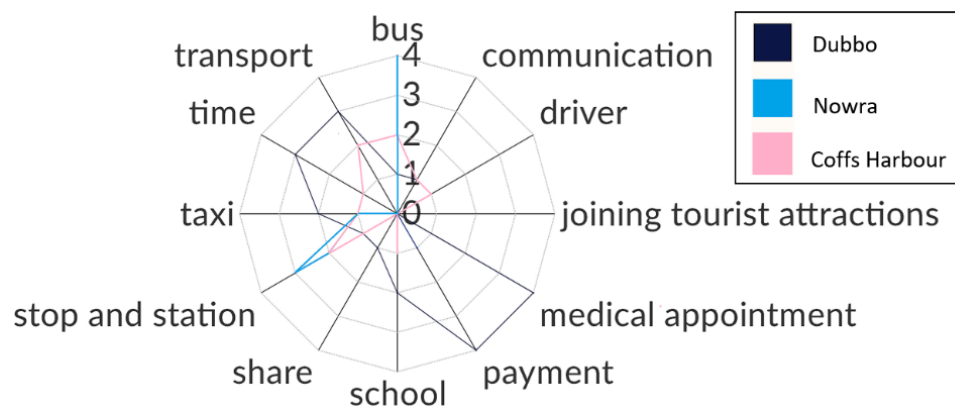


Figure 8. The number of references corresponding to different themes of six discussion groups

Participants in the discussion groups also completed a “pencil & paper” survey. The survey data will be used to ascertain the barriers to meeting users' needs and the extent to which local travel can be facilitated and behaviour changed by better integration of different forms of transport.

Quantitative study on the online survey

The online survey has been designed over three months (July-October 2022). The online survey will be piloted once Ethics approval is received and a full launch is planned for early November using the Pureprofile panel, a large survey company which provides research samples for both private and public sectors. The target respondents of the online survey are residents living in the 16 NSW Regional Cities and their hinterlands. We will pilot the survey on a small sample with 50~100 respondents

before launching the NSW-wide online survey. The recruitment plans for the online survey are provided in Table B.1 and Table B.2 of **Appendix B**.

Motivation for design

In the context of Regional Towns and Rural Hinterland MaaS, new behavioural data on mobility and non-mobility activities associated with different trip purposes such as work, health/medical, visiting family/friends, social/recreation, shopping, and education/ training will be required.

The design of the online survey builds on the initial insights obtained from the in-depth interviews and discussion groups with end users in Dubbo, Coffs Harbour, and Nowra.

In the future, there are likely to be some new initiatives that offer travellers who live in rural and regional areas more options for travelling. This may be available through subscription plans where, for a small fee, travellers can choose from an extensive set of travel options at discounted prices as well as other services. These offers mainly target short trips around and beyond the town in the catchment area, but there are also discounts available for long-distance travel if travellers choose a plan for short trips. There are also benefits not related to travel, such as grocery shopping discounts.

In summary, the online survey is designed to:

- establish the transport modes that users have used recently when travelling locally and further afield,
- collect users' feedback on some new transport initiatives designed to give users better value for money in their travel,
- elicit users' preference in different mobility plans with both mobility services and non-mobility services in the rural and regional context, and
- improve users' access to different places that users want to go or need to go using services they like or need to use.
- Generalise the findings from the three selected locations (Nowra, Coffs Harbour and Dubbo) to a wider regional NSW.

To capture the different trip purposes and mode choices between long-distance trips and local trips in rural and regional locations the survey divides travellers' trips into long-distance trips undertaken over the last 3 months within Australia and the local trips over the last 7 days with different trip purposes in the online survey. This allows exploration of the potential attractiveness of weekly subscription plan with different modes for travellers' local trips, while also providing a discount on long-distance trips if users are willing to subscribe the weekly plan.

Considerations in design

After identifying the travel needs and travel barriers of users, the online survey separately designs questions on respondents' long-distance and short-distance trips (local travel) to better understand the potential services or travel modes that attract users most. The survey includes eight Sections:

- 1) Several questions about respondents' basic information such as postcode, gender, and age;
- 2) Several questions about using car, public transport and ride share (taxi, Uber);
- 3) Several questions about long-distance trips denoting trips outside the marked area on a customised map (see Figure 9) within Australia that respondents have undertaken over the last 3 months;
- 4) Several questions about local travel trips that respondents have made during the last 7 days (see Figure 10);
- 5) Stated preference (SP) **choice games** including both transport and other services were designed for the respondents' local travel (see Figure 11 and Figure 13), and each choice game

displays respondents' current travel costs based on their previous input information and two alternative subscription plans with 10 attributes such as community based transport using electric vehicles, community based transport using petrol/diesel vehicles, Taxi/Rideshare, local bus, car club/car subscription services, on-demand bus, home delivery goods, shopping goods, media streaming services, and subscription fee. Each participant is required to finish two choice games and fill in the "Future Columns" (see Figure 12 and Figure 14);

- 6) Several questions about respondents' feedback on their subscription plans;
- 7) Several questions about respondents' views on current travel services and attitudes towards the idea of a Community Mobility Club;
- 8) Several questions about respondents' background.

Figure 11 and Figure 13 give an example of weekly subscription plans to which travellers could subscribe for a small fee in order to take advantage of the discounts under two scenarios. Each participant will be asked to choose their preferred option between Subscription Plan A, Subscription Plan B or their current travel arrangements if they do not like either plan. Participants are asked to review each subscription plan carefully before responding to each scenario to help them design a bundle of transport services that can deliver benefits and make it easier to get around. It is essential to make participants understand that although some of the transport and other services listed may not be available where they live today, but they may be in the future. The objective is to find out which, if any, they would be interested in using.

Moreover, the survey explores how travellers' weekly travel in the local area would change in terms of trips by mode they make, assuming that the subscription plan they chose was available. Therefore, each participant will be asked to fill in the "Future Columns" in the choice games (see Figure 12 and Figure 14), assuming that all modes of transport can be provided in the future.

The estimated achievable sample size of the online survey is 1,331 respondents provided by the PureProfile panel (see Table B1 in **Appendix B**).

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Section 3 – Long Distance Trips Over the Last 3 Months

Now we would like to ask you some questions about long-distance trips you have undertaken over the last 3 months. By long-distance, we mean trips outside marked area in the map but **within Australia**. You can zoom in to see more details of the highlighted area on the map.

Long distance trips are those outside marked area in the map.

Q11. Please choose up to three main reasons for which you have taken long-distance trips (outside the area on the map but within Australia) over the last 3 months.

- Health/Medical appointments
- Education/Training trips
- Visiting Family/Friends
- Social/Recreational activities (excl holiday)
- Work
- Business
- Holiday
- Other

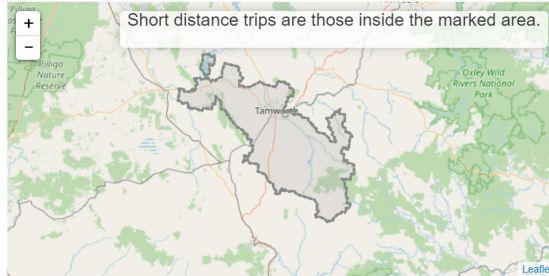
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Figure 9. Long distance trips over the last 3 months

Section 4 - Your Local Travel Over the Last 7 Days

Now we would like to ask you some questions about **trips** you've made over the last 7 days within the area shown on the map. You can zoom in to see more details of the highlighted area on the map. We'll call these **shorter trips**



Q15. Please choose the reasons for which you have taken **shorter trips** in the last 7 days.

- Work (including volunteering)
- Health/Medical (e.g., hospital, doctor)
- Visiting Family/Friends (in the home)
- Social/recreation (outside the home), e.g. restaurants, parks, day trips
- Shopping
- Education/Training

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Figure 10. Local travel trips over the last 7 days

Scenario 1 (of 2)



All subscription plans also offer a 20% discount on fares and other expenses such as accommodation for long-distance trips.










Weekly Subscription Plans	Current Costs	Subscription Plan A	Subscription Plan B	None of these plans
Transport services				
Community based transport using hybrid/electric vehicles 	you are paying \$5 per trip	30% off fare	15% off fare	
Community based transport using petrol/diesel vehicles 	\$2/km if you use	15% off fare	10% off fare	
Taxi/Rideshare (e.g., Uber) 	you are paying \$20 per trip	20% off fare	15% off fare	
Local Bus 	\$3.2/trip if you use	20% off fare	30% off fare	
Car club/Car subscription services (e.g., Goget, and Car Next Door) 	\$0.73/km if you use	15% off fare	30% off fare	
On-demand bus 	\$3.2/trip if you use	20% off fare	5% off fare	
Discount on other goods and services				
Home delivery goods (including food and beverages ordered and delivered to your home) 	you are paying \$50 per week	0% off per week	30% off per week	
Shopping goods including click and collect purchased by visiting a store (e.g., grocery and retail) 	you are paying \$100 per week	10% off per week	15% off per week	
Media streaming services (e.g., Netflix, Foxtel) 	you are paying \$10 per month	10% off per month	25% off per month	
Weekly subscription fee		\$4 per week	\$6 per week	
I will choose one of these subscription plans		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 11. Choice game example (Scenario 1)

Please note that the Future column is where you can list the number of trips for each trip purpose by mode of transport that you would like to make taking advantage of discounts in your selected plan.

	Work		Health/Medical appointments		Visiting Family/Friends (in the home)	
	Current	Future	Current	Future	Current	Future
Community based transport using hybrid/electric vehicles	1	2				
Community based transport using petrol/diesel vehicles						
Taxi/ Rideshare (e.g., Uber)			2			2
Local bus						
Car club/Car subscription						
On-demand bus				2		1
Private car as driver					2	
Private car as a passenger in a carpool or your own family car						
Walk/Bicycle all the way						

Figure 12. Choice game with future column example (Scenario 1)

Scenario 2 (of 2)

Add-on Item All subscription plans also offer a **20%** discount on fares and other expenses such as accommodation for long-distance trips.










Weekly Subscription Plans	Current Costs	Subscription Plan A	Subscription Plan B	None of these plans
Transport services				
Community based transport using hybrid/electric vehicles 	you are paying \$5 per trip	15% off fare	30% off fare	
Community based transport using petrol/diesel vehicles 	\$2/km if you use	20% off fare	5% off fare	
Taxi/Rideshare (e.g., Uber) 	you are paying \$20 per trip	15% off fare	20% off fare	
Local Bus 	\$3.2/trip if you use	20% off fare	30% off fare	
Car club/Car subscription services (e.g., Goget, and Car Next Door) 	\$0.73/km if you use	15% off fare	30% off fare	
On-demand bus 	\$3.2/trip if you use	15% off fare	10% off fare	
Discount on other goods and services				
Home delivery goods (including food and beverages ordered and delivered to your home) 	you are paying \$50 per week	30% off per week	0% off per week	
Shopping goods including click and collect purchased by visiting a store (e.g., grocery and retail) 	you are paying \$100 per week	5% off per week	20% off per week	
Media streaming services (e.g., Netflix, Foxtel) 	you are paying \$10 per month	15% off per month	20% off per month	
Weekly subscription fee		\$4 per week	\$6 per week	
I will choose one of these subscription plans		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 13. Choice game example (Scenario 2)

Please note that the **Future column** is where you can list the number of trips for each trip purpose by mode of transport that you would like to make taking advantage of discounts in your selected plan.

	Work		Health/Medical appointments		Visiting Family/Friends (in the home)	
	Current	Future	Current	Future	Current	Future
Community based transport using hybrid/electric vehicles	1			1		1
Community based transport using petrol/diesel vehicles						
Taxi/ Rideshare (e.g., Uber)			2	2		
Local bus		2				
Car club/Car subscription						1
On-demand bus						1
Private car as driver					2	
Private car as a passenger in a carpool or your own family car						
Walk/Bicycle all the way						

Figure 14. Choice game with future column example (Scenario 2)

Approach to analysis

This quantitative study will use a discrete choice modelling framework with a model form that allows for dependence across responses by grouping alternatives into broader categories. The aim is to obtain statistical evidence informing the development of MaaS in regional NSW, with a particular focus on the types of service that could improve rural and regional mobility and social equity. The dependent data measures the mode of transportation across six possible choices: community based transport using hybrid/electric vehicles, community based transport using petrol or diesel vehicles, local bus, taxi/ rideshare, car subscription, on-demand bus, private car as a driver, private car as a passenger, walk/bicycle. Outcomes are considered on two nest levels: first the decision on a weekly subscription plan (current travel, Plan A, Plan B), then the decision on the mode in the weekly subscription plan.

The modelling procedure will be conducted once the survey data collection is completed, and the outcomes of the choice modelling, together with the obtained insights, will be reported in MS6.

Conclusion and next steps

This report (MS5) has detailed the progress, introduced the data collection methodology and provided initial findings and insights. Two strands of work are summarised: 1) Progress with the administration of in-depth interviews with key stakeholders at the selected three locations, including an introduction to the qualitative analysis; and 2) Progress with the design of end-user surveys including end-user group discussions and a “pencil & paper” survey at the selected three locations, and the development of the NSW-wide online survey with state-of-the-art stated preference experiment.

Plans for the next stage

In the next stage, the qualitative and quantitative analysis will be finalised and the main findings relevant to the blueprint for RTRH MaaS will be confirmed. Specifically, the main tasks of the next stage include:

- To explore how the outputs are to be used in the development of the blueprint.
- To summarise the main findings from the analysis of collected primary data focussing on the blueprint for RTRH MaaS.
- To undertake all appropriate data analysis derived from the synthesis of research findings with a focus on in-depth insights.
- To prepare a final report (MS6) detailing the main findings and a blueprint for future RTRH MaaS trials.

The project timeline including aimed timeline for the current and next stage and the actual timeline has been summarised in the Gantt chart (see Figure 15).

Stages	Tasks	2022							2023			
		06	07	08	09	10	11	12	01	02	03	
In-depth interviews	Prepare and collect In-depth interviews Data	Actual timeline										
	Conduct qualitative study on In-depth interviews			Actual timeline								
	Organize the results of In-depth interviews						Aimed timeline					
Focus group discussions	Prepare the focus group discussions materials with pencil & paper" survey		Actual timeline									
	Collect focus group discussions data			Actual timeline								
	Conduct qualitative study and organize the results of focus group discussions						Aimed timeline					
Online survey	Design the online survey		Actual timeline									
	Launch pilots of the online survey											
	Collect data of the online survey in field						Aimed timeline					
	Clean the data of online survey								Aimed timeline			
	Conduct Discrete Choice Modelling									Aimed timeline		
Research output	Prepare MS6 Report									Aimed timeline		
	Prepare MS7 Report										Aimed timeline	
	Research output and journal submission								Aimed timeline			


 Aimed timeline  Actual timeline

Figure 15. Project timeline

Appendices

- A.** RTRH MaaS - Summary of the three locations
- B.** List of 16 Regional Cities and expected sample
- C.** Discussion Guide – Groups with Community Members
- D.** Discussion Group – Accompanying “pencil & paper” Survey Form