

# Demand Responsive Transport: one small step towards MaaS

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# What I will cover

- Mobility in Queensland
- Queensland's emerging draft MaaS roadmap
- Demand Responsive Transport (DRT); a small step towards MaaS
- Logan DRT trial overview and findings
- Opportunities and challenges of DRT in the pursuit of a future mobility ecosystem



Community Informed



Customer Responsive



Flexible to Demand

# Mobility in Queensland



**182.3m**  
in SEQ

**11.5m**  
outside SEQ

trips taken annually on bus,  
rail, ferry and light rail



**2.67m**  
*go cards*  
*used 17/18*



**Over 500,900**  
passengers travel on  
the SEQ network on  
average each day



# Mobility in Queensland



# Change ahead

The forces driving change in the transport sector are similar to those shaping other sectors of the economy

- 1 Consumers are driving change
- 2 Public and private provision are blurring
- 3 Transport is becoming a technology business
- 4 A new era of short term uncertainty has arrived



## New Experiences



Connected

Seamless

Contextual



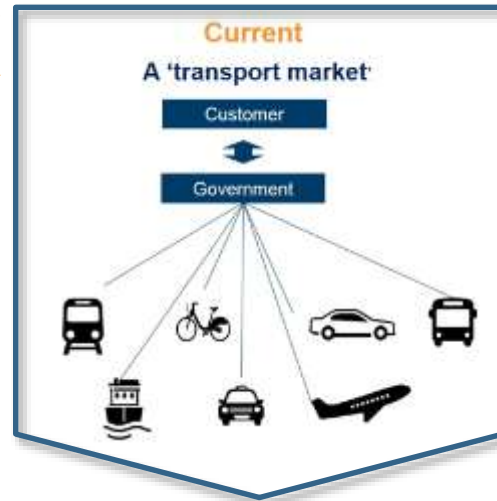
Shared

On-Demand

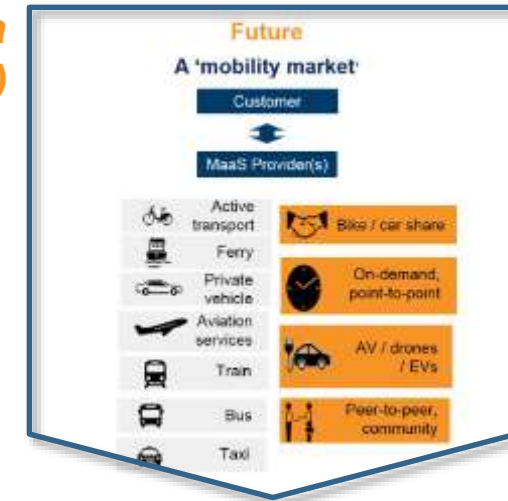
Individualised

# MaaS vs Traditional Transport Model

*Traditional transport network*

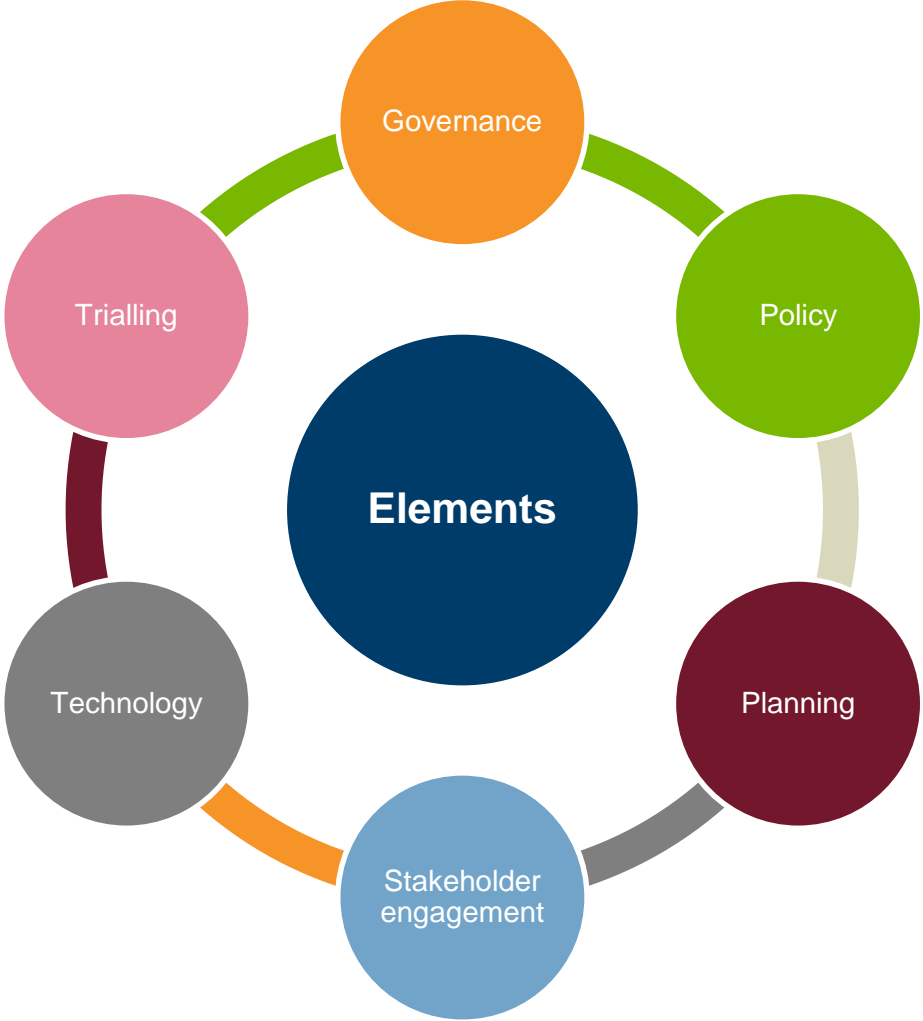


*Mobility as a Service (MaaS)*



|                            |   |   |
|----------------------------|---|---|
| <b>Services</b>            | Modally focused                                   | End-to-end journey focused  |
| <b>Service structure</b>   | Public transport / private transport separated    | Whole-of-mobility transport network   |
| <b>Payment</b>             | Relatively fixed payment – e.g. ticket or pre-pay | Choices of pay-as-you-go, pre-pay or post-pay, including monthly subscription options |
| <b>Customer experience</b> | ‘One size fits all’                               | Personalised solution   |
| <b>Information</b>         | A mix of ‘limited’ and real time information      | Real time personalised transport updates  |
| <b>Data</b>                | Closed data                                       | Shared data   |

# Queensland's Draft MaaS Roadmap



# Demand Responsive Transport (DRT)



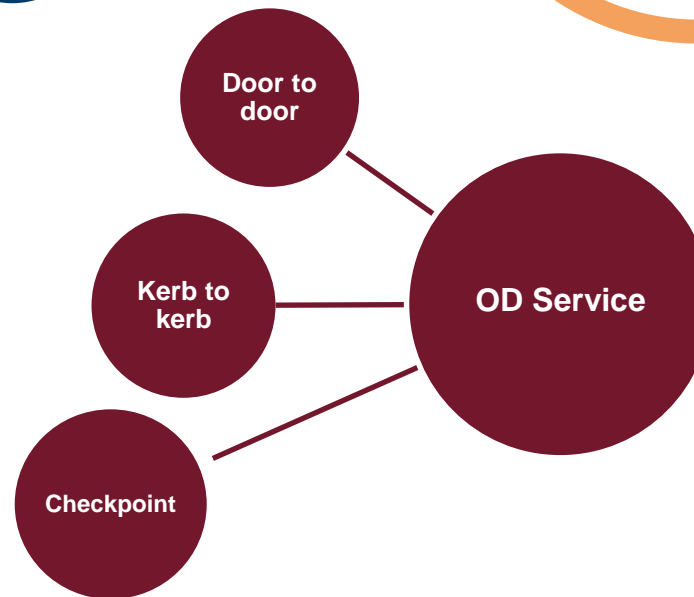
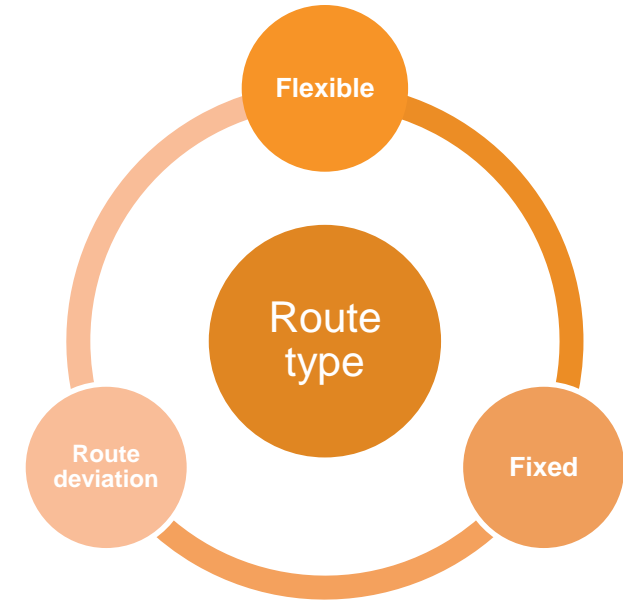
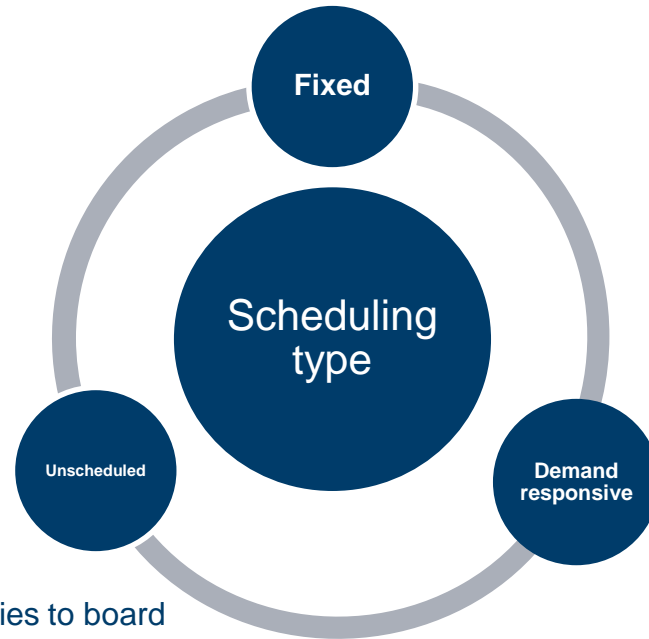


# DRT in Queensland

- DRT in Queensland isn't a recent phenomenon:
  - Kan-go
    - Toowoomba
    - Hervey Bay
  - Flexilink
    - Ipswich
    - Sunshine Coast
  - Council Cabs – various Local Governments
  - Personalised Public Transport – Brisbane City Council



# Service Plan



# Opportunities for ‘contemporary’ DRT

*Why are advances in technology making the possibility of demand responsive services more operationally feasible?*

- **Booking options:** online & smart phone
- **End to end journey planning:** connect to bus, rail, ferry, light rail
- **Route optimisation and scheduling:** more efficient services
- **Flexible fleet:** better utilisation / productivity
- **Cashless payment:** EFT / account based ticketing
- **Fares and ticketing:** integrated fares and payments
- **Customer notifications:** real time service notification
- **Customer feedback:** feedback (“rate my ride”)
- **Customer service:** personalised but shared service
- **Sharing economy:** greater acceptance

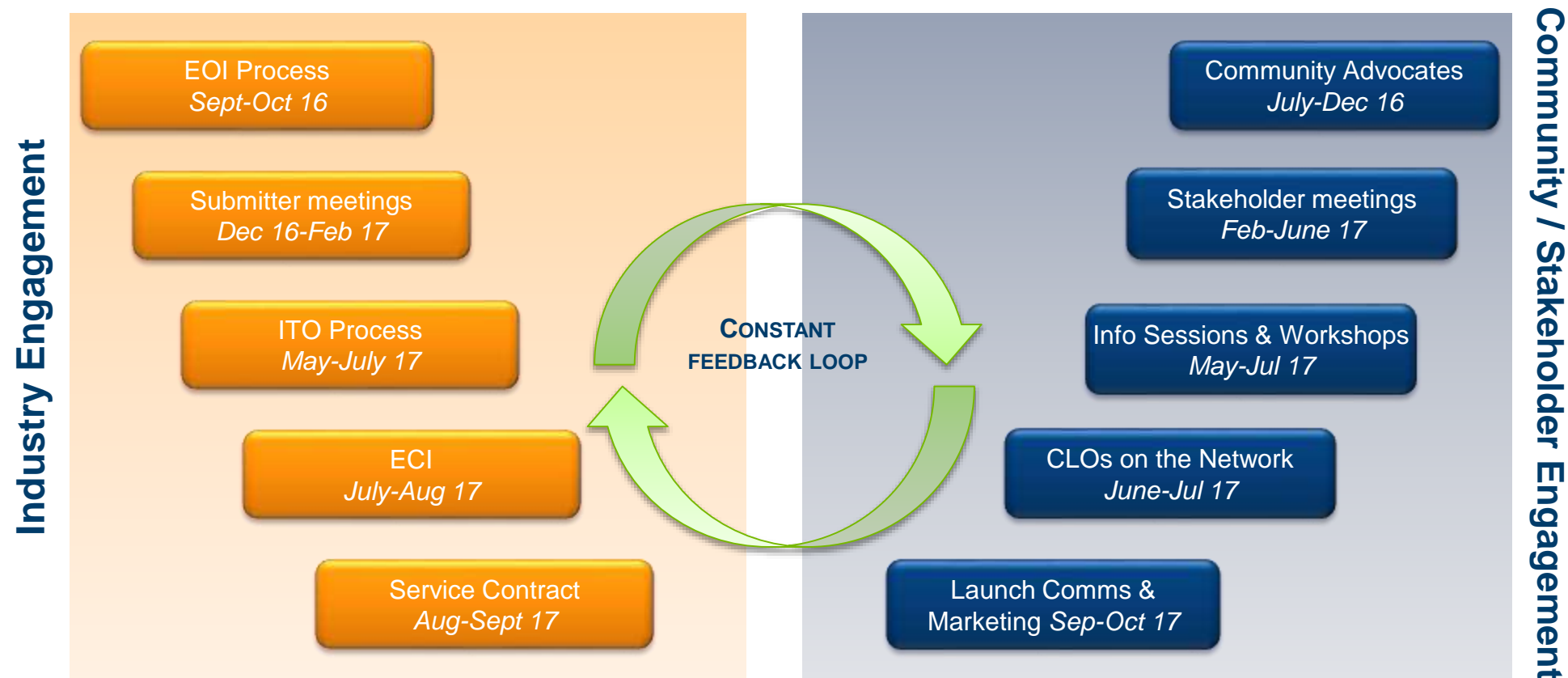
# Logan DRT trial objectives

- **Increasing social inclusion:** provide public transport options that enable inter-community connections and community hubs
- **Increased connectivity:** DRT facilitates customers trip to existing public transport hubs
- **Accessibility:** a variety of vehicle types will enable travel for all sections of the community
- **Customer-first:** supporting the continuing goal to place the customer at the centre of their travel options.
- **TMR's role in DRT across QLD:** testing the extent to which TMR plays a role in micro-transit style services



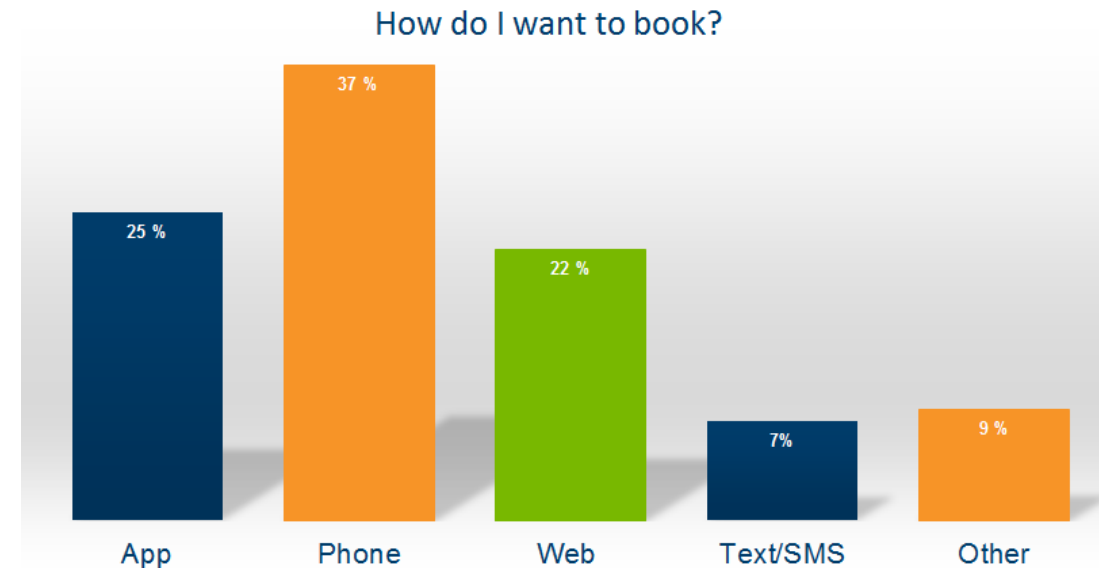
# Collaborative design methodology

- TMR brokering industry capability with customer needs to deliver an outcome that allows equitable access for the Logan community

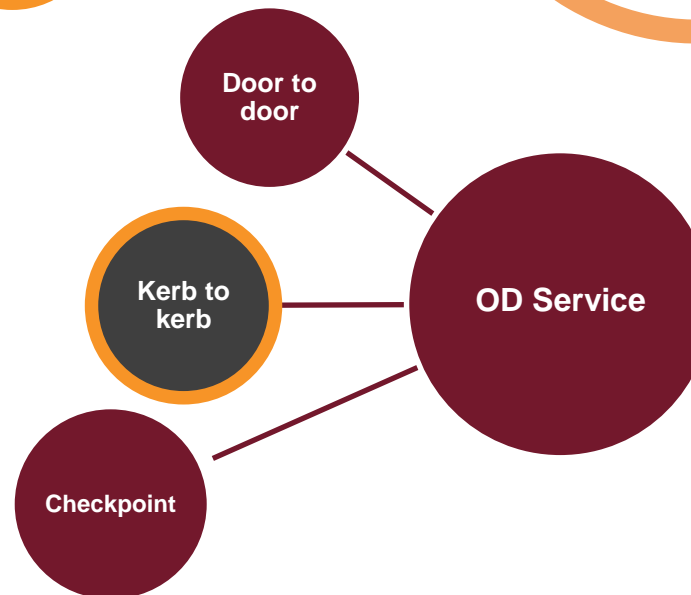
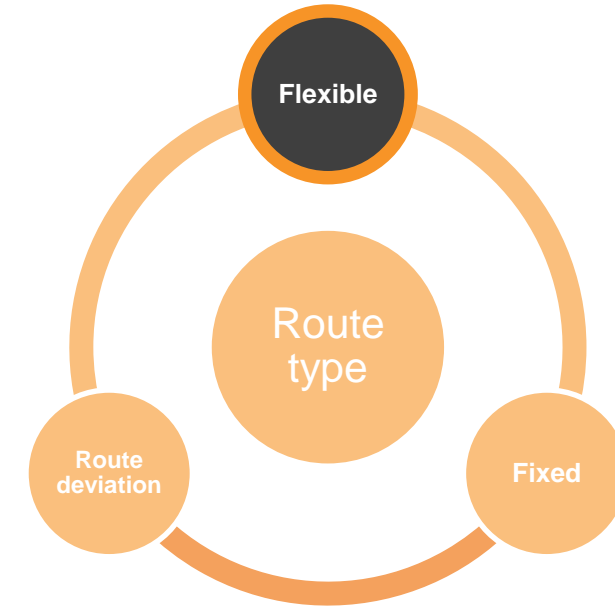
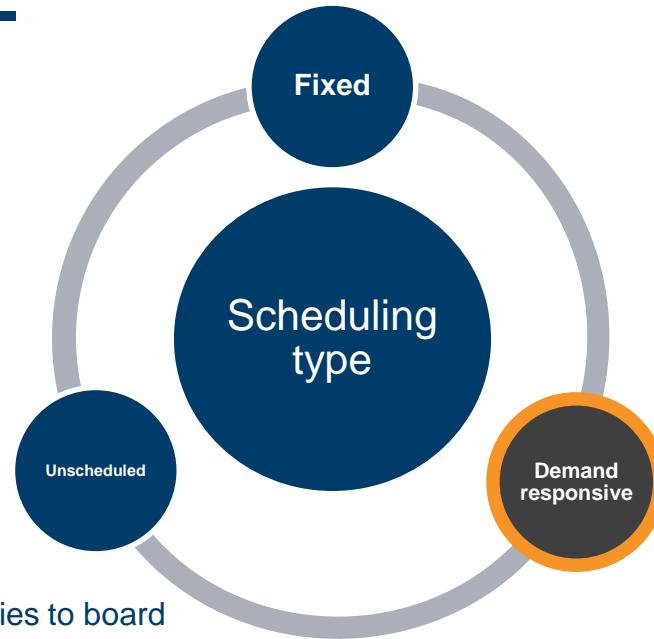


# Community engagement - learnings

- Limited readiness for all sections of the Logan community to embrace a technology led service for booking and payment
  - Highlighted the need for telephone bookings and a close connection between the call centre and scheduling / dispatch operation
- Potential customers highlighted the need for a variety of options
- Integration with go card was considered important and in most consultation sessions attendees assumed that *go card* would be available
- Concession fares were considered critical and the suggestion of a standard fare was rebuked by customers



# Logan Trial – Service Plan

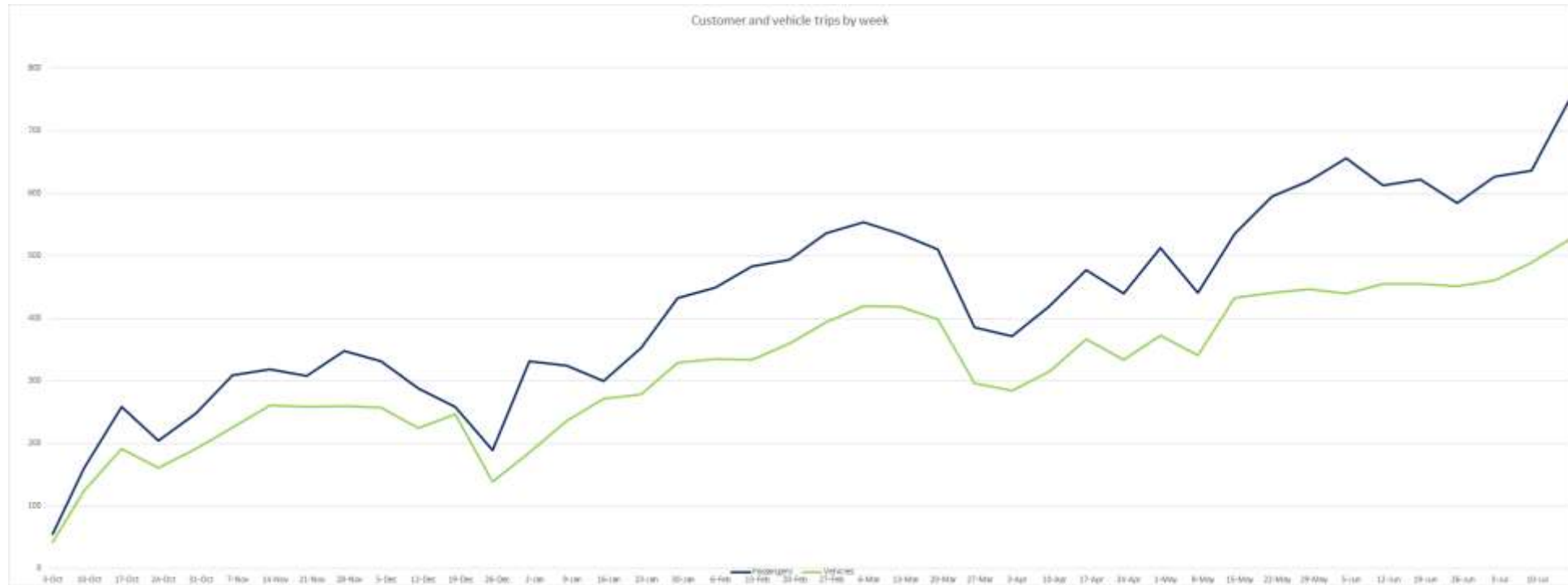


# Service Plan

|                            |  |
|----------------------------|--|
| <b>Scheduling type</b>     | demand responsive (no fixed or shadow schedule)                                    |
| <b>Route type</b>          | flexible   |
| <b>O-D relationship</b>    | Many to few (more than one location at one trip end but few of these)              |
| <b>Vehicle type</b>        | taxi (wheelchair accessible maxi based on mobility)                                |
| <b>Span of hours</b>       | 6am to 10pm seven days including public holidays                                   |
| <b>Booking window</b>      | <b>Phase one:</b> 8 hours in advance<br><b>Phase two:</b> 2 hours in advance       |
| <b>Fare structure</b>      | flat fare (with 50% reduction for most concessions)                                |
| <b>Fare</b>                | \$3 / \$1.50 / \$0.00 (all eligible concessions)                                   |
| <b>Pick up / drop time</b> | within 30 mins of desired time   |
| <b>Pick up / drop off</b>  | nineteen locations including rail and bus stations, shopping and community centres |
| <b>Booking method</b>      | <b>Phase one:</b> phone + SMS<br><b>Phase two:</b> mobile application and website  |
| <b>Payment method</b>      | cash & EFT on board / prepay vouchers & per trip                                   |

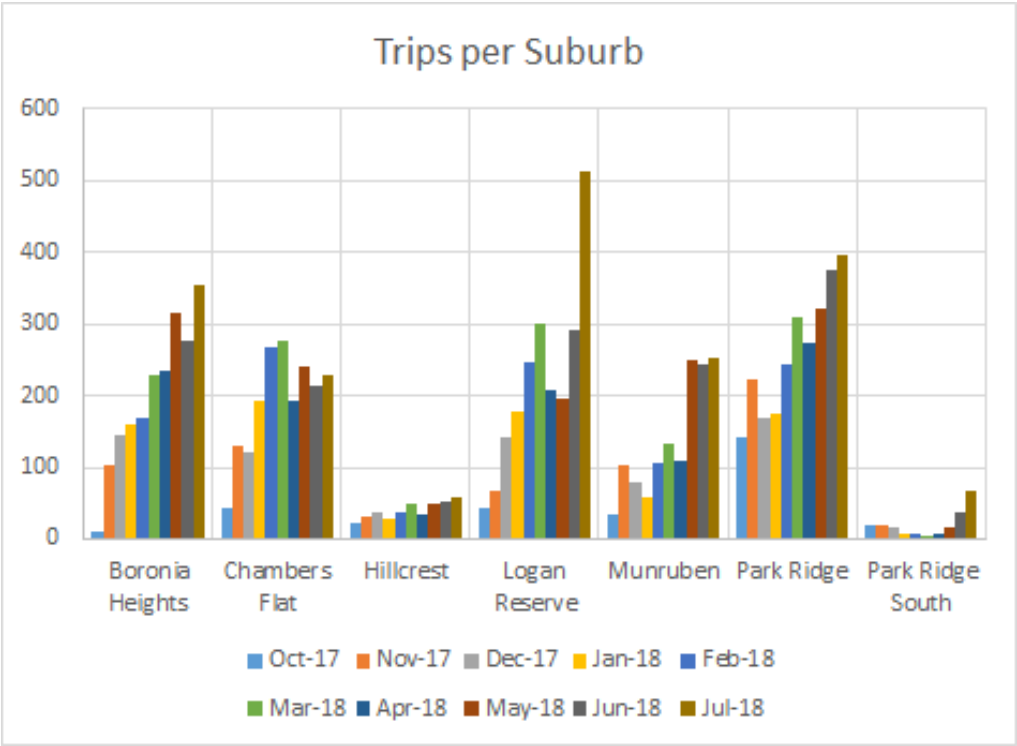
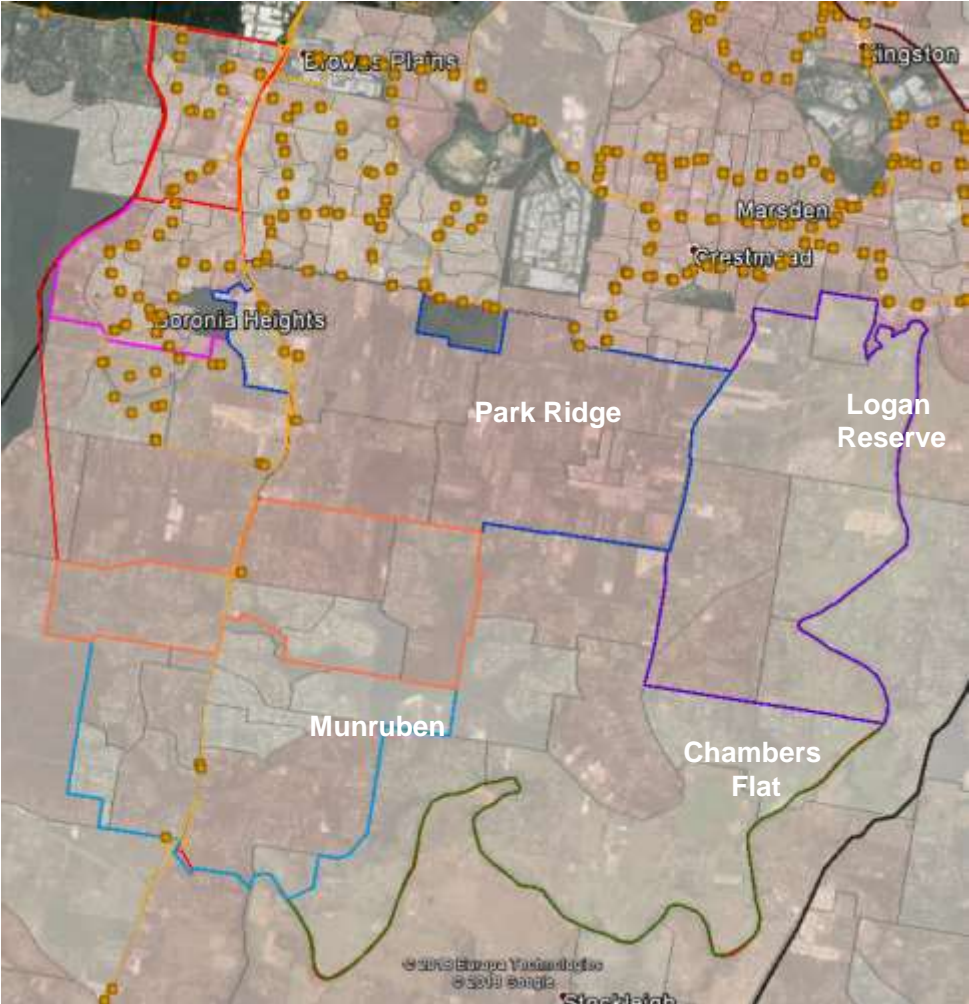


# Trial performance



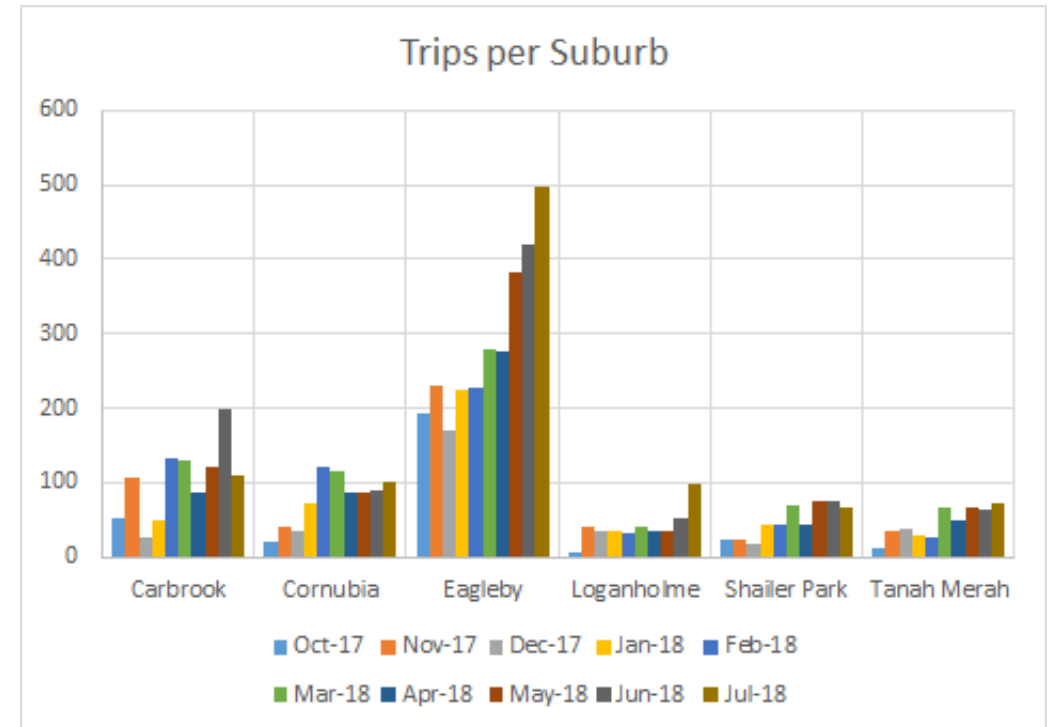
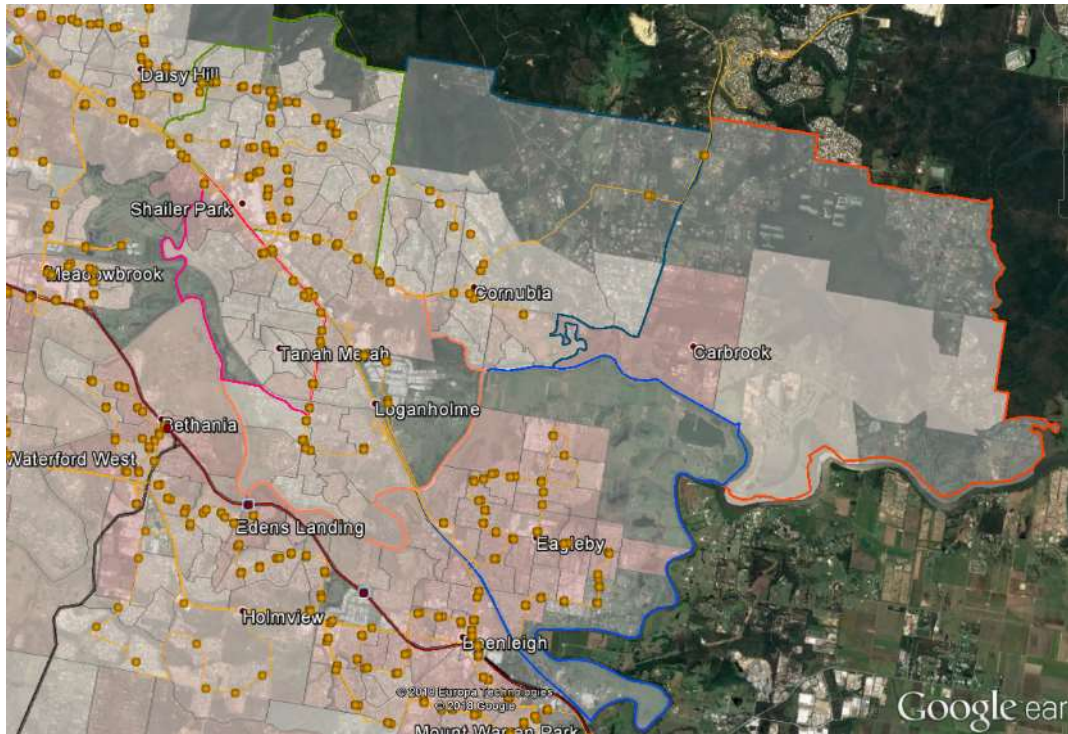
- Overall patronage continues to grow week on week
- Solid base of regular / active customers that use the service often
- Highest performing suburbs are those where the current PT network is limited such as Chambers Flat, Logan Reserve and Park Ridge

# Trial performance – area A



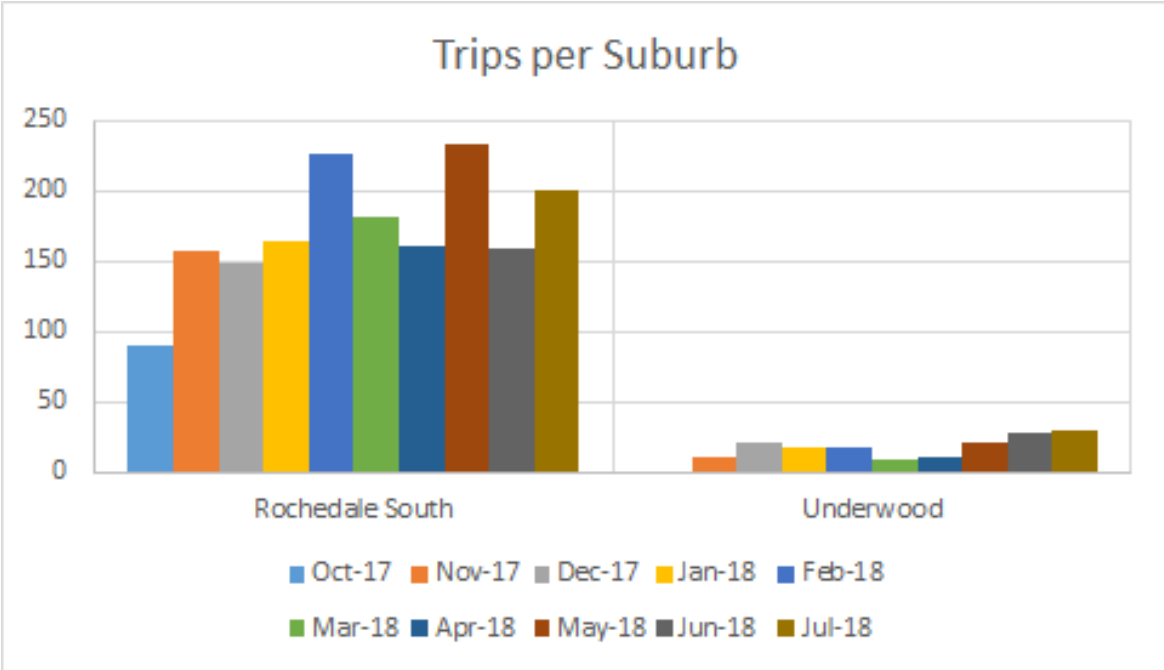
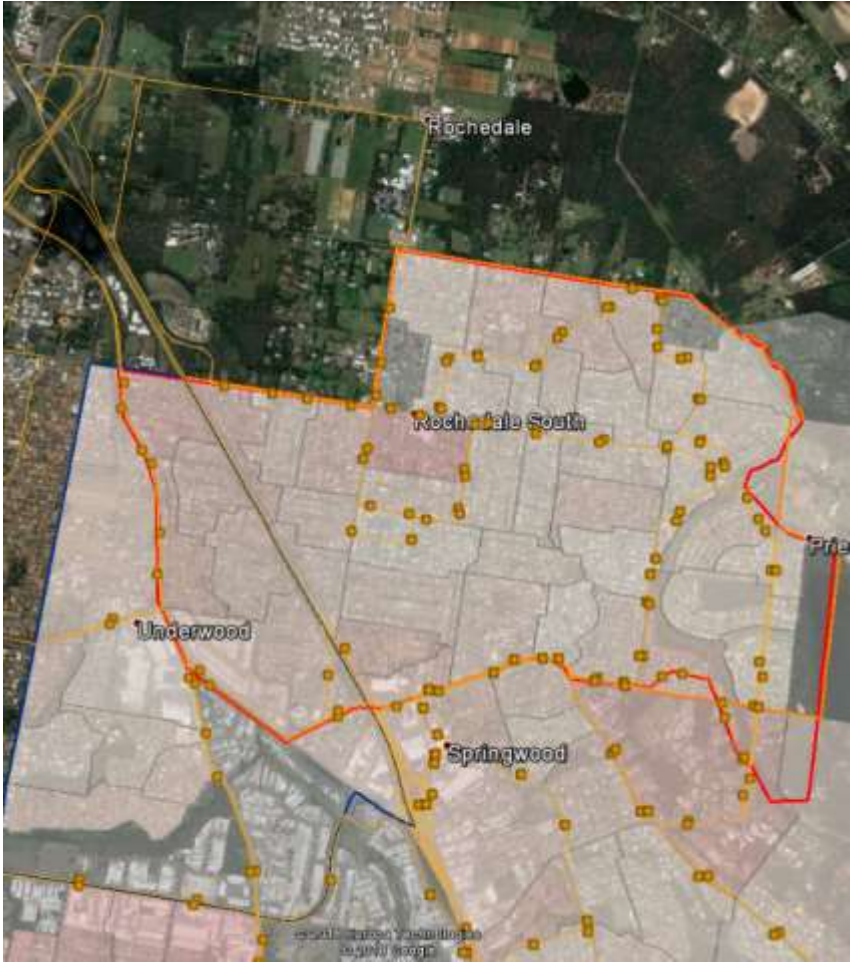
|                  | Oct-17 | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Boronia Heights  | 9      | 103    | 144    | 160    | 170    | 230    | 234    | 317    | 278    | 354    |
| Chambers Flat    | 42     | 130    | 122    | 193    | 269    | 278    | 194    | 242    | 214    | 229    |
| Hillcrest        | 22     | 32     | 36     | 28     | 37     | 48     | 33     | 48     | 51     | 59     |
| Logan Reserve    | 44     | 67     | 141    | 179    | 246    | 302    | 209    | 195    | 292    | 513    |
| Munruben         | 35     | 103    | 78     | 58     | 106    | 132    | 109    | 249    | 244    | 252    |
| Park Ridge       | 143    | 222    | 168    | 174    | 245    | 311    | 274    | 323    | 375    | 395    |
| Park Ridge South | 19     | 19     | 15     | 8      | 6      | 1      | 8      | 16     | 36     | 68     |

# Trial performance – area B



|              | Oct-17 | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Carbrook     | 51     | 108    | 25     | 50     | 133    | 131    | 87     | 122    | 199    | 110    |
| Cornubia     | 19     | 40     | 35     | 71     | 120    | 114    | 86     | 86     | 89     | 101    |
| Eagleby      | 194    | 230    | 171    | 225    | 226    | 279    | 275    | 382    | 421    | 499    |
| Loganholme   | 7      | 40     | 35     | 34     | 32     | 41     | 34     | 35     | 51     | 97     |
| Shailer Park | 23     | 23     | 18     | 43     | 42     | 70     | 43     | 75     | 74     | 65     |
| Tanah Merah  | 11     | 36     | 39     | 28     | 25     | 66     | 48     | 66     | 64     | 72     |

# Trial performance – area C



|                 | Oct-17 | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Rochedale South | 90     | 158    | 148    | 164    | 226    | 181    | 161    | 234    | 159    | 201    |
| Underwood       | 0      | 10     | 21     | 18     | 18     | 8      | 10     | 21     | 28     | 30     |

# Shared learning for MaaS

## Mobility as a Service opportunities and challenges

- Opportunity to leverage the market to deliver seamless journeys
- Co-creating outcomes with customers can drive more sustainable and fit-for-purpose outcomes
- Technology exists that can aggregate and personalise mobility and innovative customer outcomes are available from the market
- No “one size fits all” approach internationally
- TMR’s geographic reach is vast

## DRT trial learnings

- TMR and industry must work together to deliver a single integrated transport network accessible to everyone
- Collaborative design process was resource intensive but led to equitable customer outcomes
- Whilst TMR must adapt and embrace change customers told us that a variety of options must be offered to provide equitable access
- The Service plan could vary locally subject to demographics - on demand / technology led solutions effective in some areas but not all

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# Thank you and stay connected

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