

Mobility-as-a-Service (MaaS) and the potential of multiservices

**2023 TRANSW Symposium
Sydney, 23 November 2022**

**Institute of Transport and Logistic Studies
University of Sydney Business School**

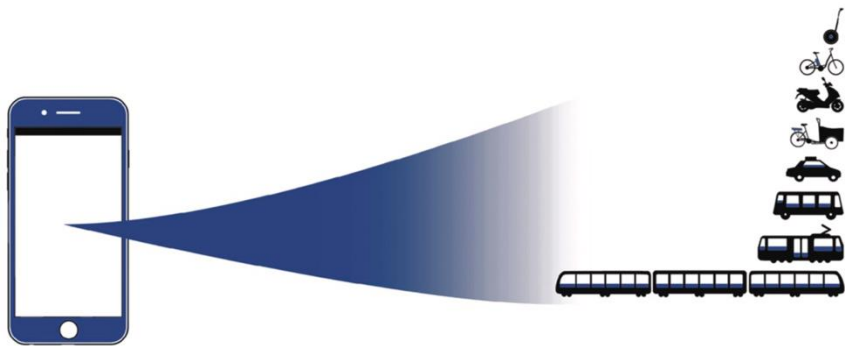


Aitan M. Militao

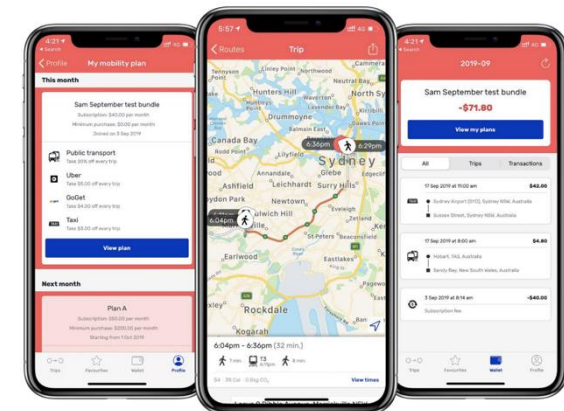
**Supervisors: Dr. Chinh Ho
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What is MaaS?

MaaS is a user-centric digital platform that enables users search, book, and pay for multiple mobility services, either per ride or through subscription.

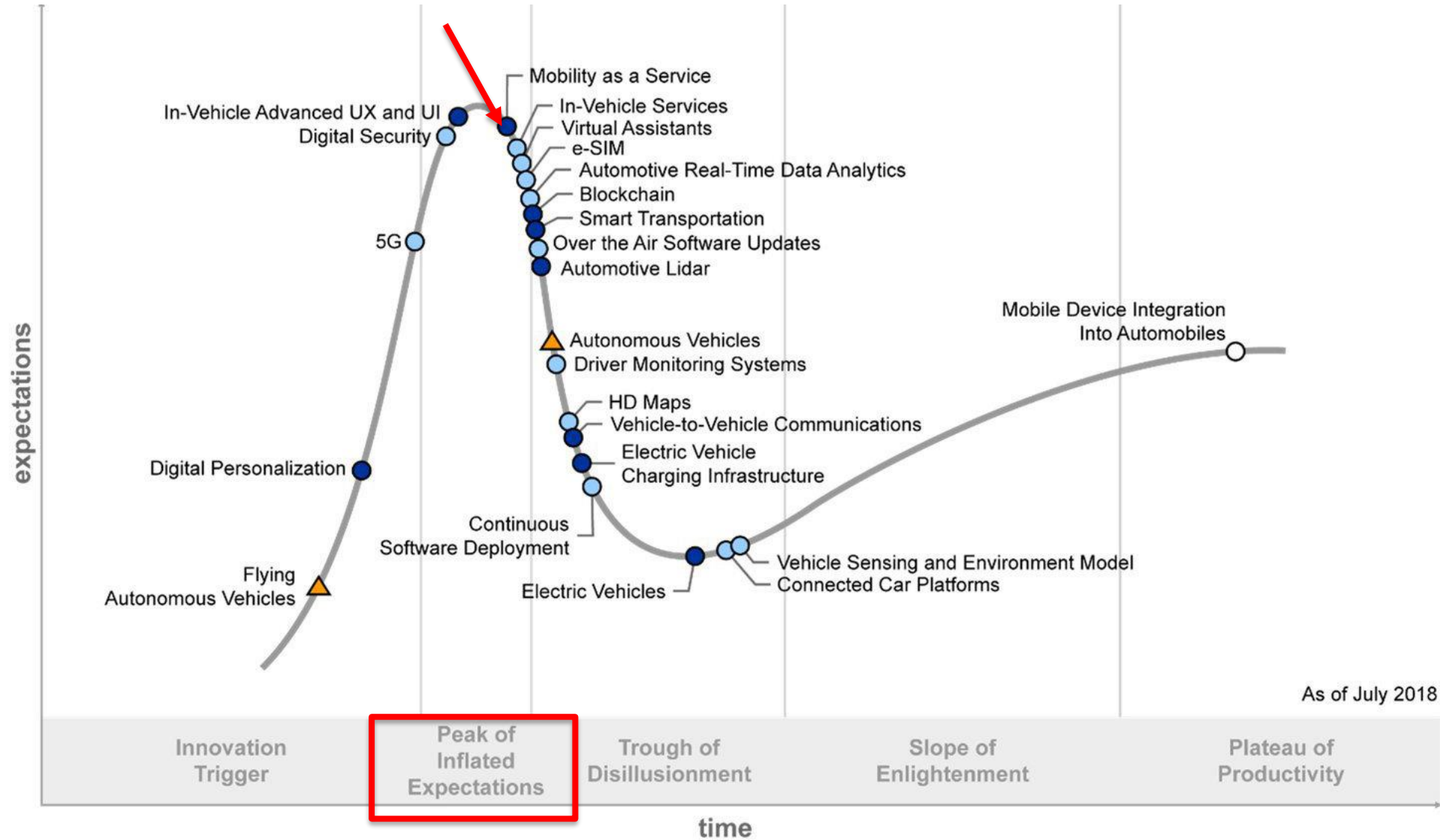


Source: Smith & Hensher, 2020



Source: SkeedGo, 2021

Hype cycle: 2018



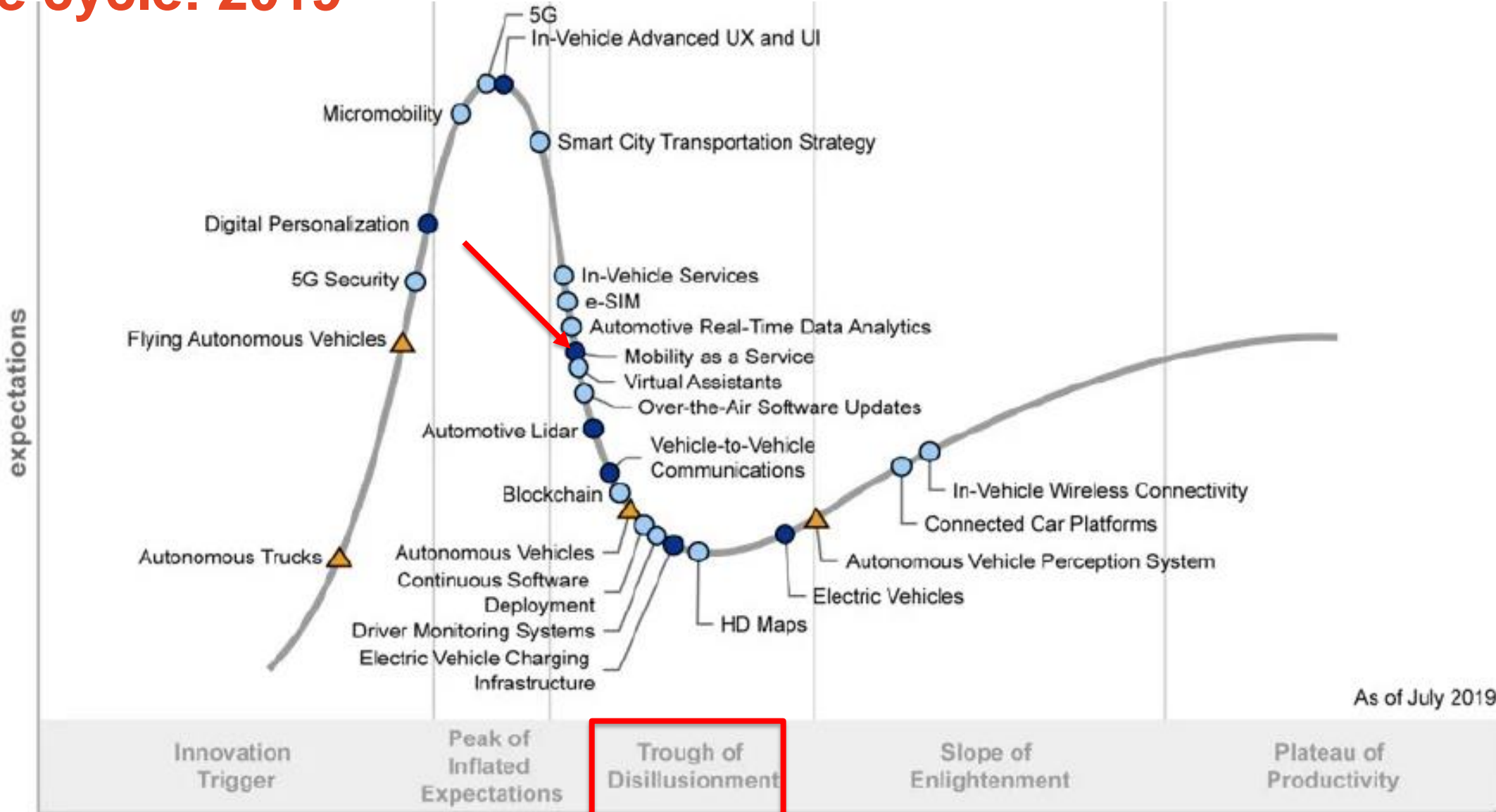
As of July 2018

Plateau will be reached:

- less than 2 years
- 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau

Source: Gartner, 2018

Hype cycle: 2019



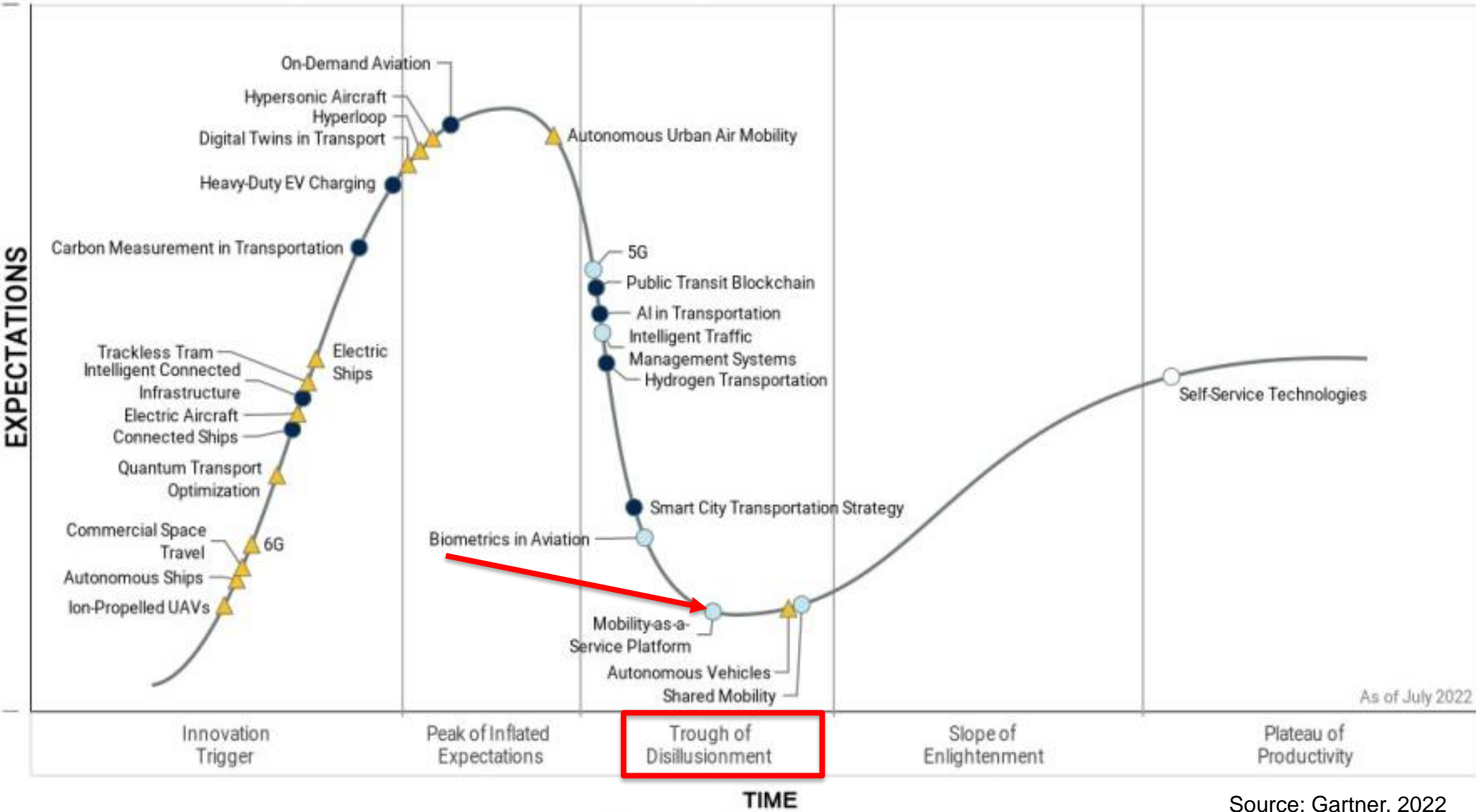
As of July 2019

Source: Gartner, 2019

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Hype cycle: 2022



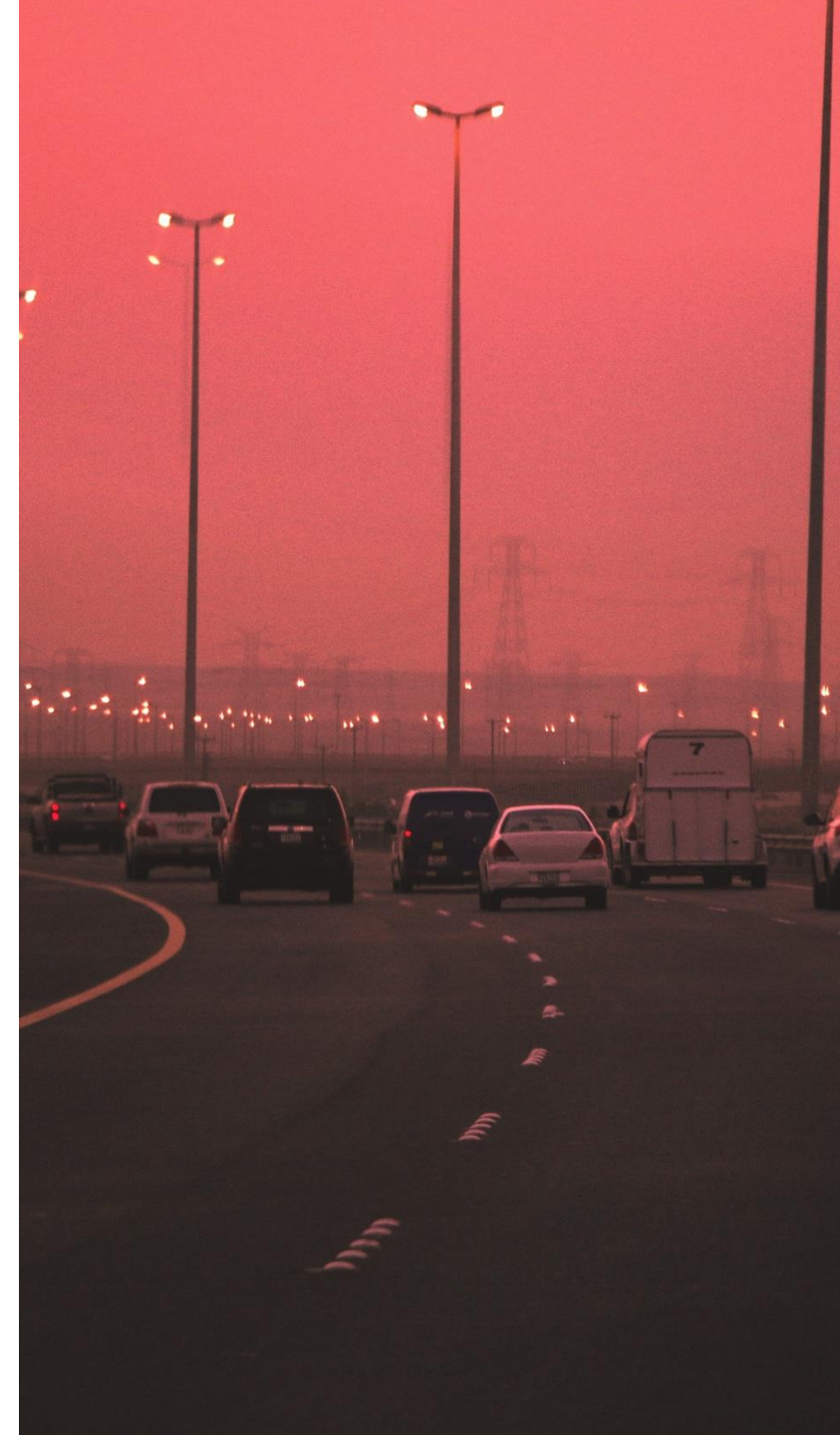
As of July 2022

Source: Gartner, 2022

Plateau will be reached: ○ <2 yrs. ● 2-5 yrs. ● 5-10 yrs. ▲ >10 yrs. ⊗ Obsolete before plateau

Transportation and Sustainability

- Mobility as a Service (MaaS): a potential positive impact
- **MaaS** failure?
- Empirical evidence from Sydney MaaS trial
 - Travel behaviour change
 - Financial incentives





The multiservice concept

- Utilities provision together with MaaS non-storable characteristic shared with mobility and aggregator position (Mulley & Nelson, 2020)
- One option is the extension from a multi-modal to a **multi-service MaaS** (Hensher & Mulley, 2021)
- An opportunity for the creation of different business models and increase commercial viability
- MaaS – Mobility-as-a-feature (Hensher & Hietanen, 2023)

Research Design and Methods

Stage 1: Identifying potential services – qualitative study

- **Data collection:** Semi-structured interviews. 10~15 interviews with two groups:
 - “thought leaders in the MaaS space” (selective sampling)
 - General public
- Potential candidates are from the private sector, academia and government
- **Data analysis:** Data coding using the Gioia Method (Gioia et al., 2012) and Grounded Theory.

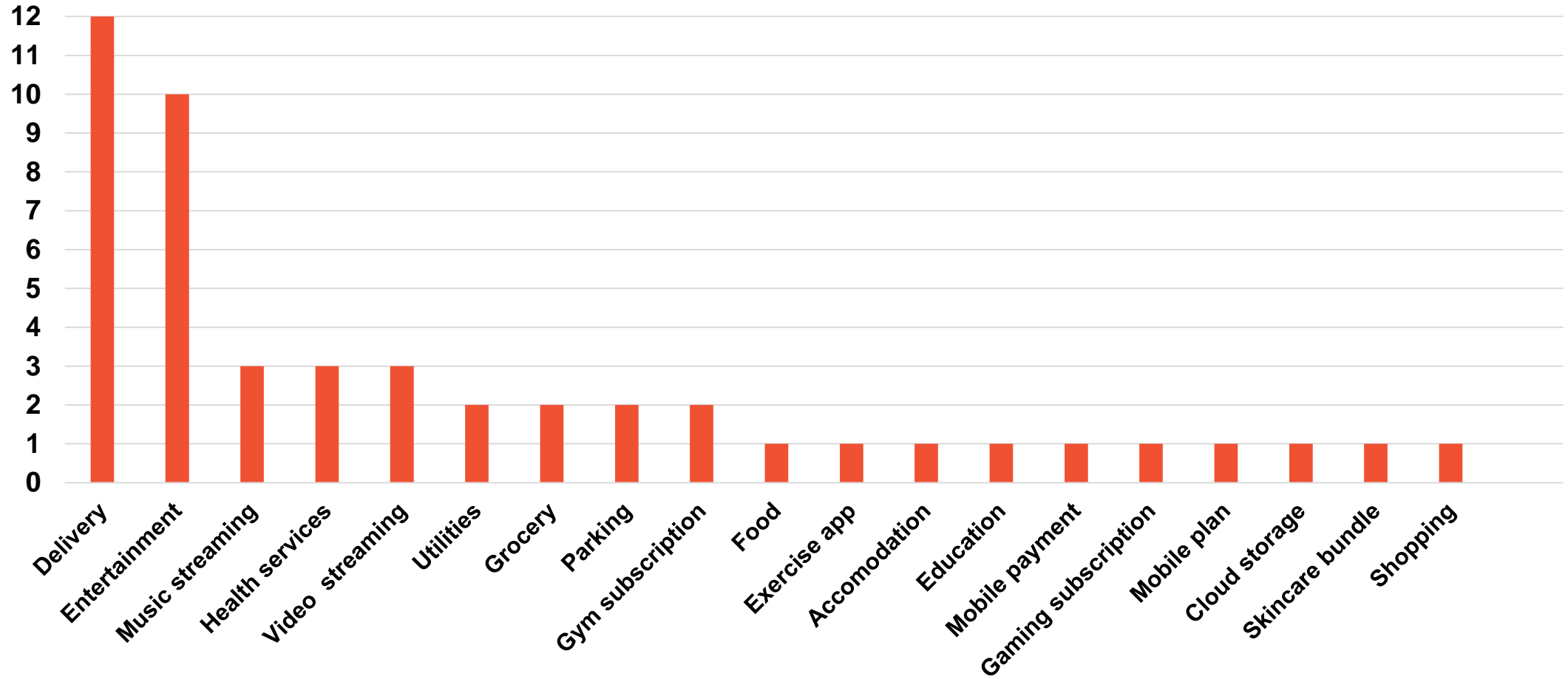


Stage 2: Stated Choice Experiment - Multiservice MaaS

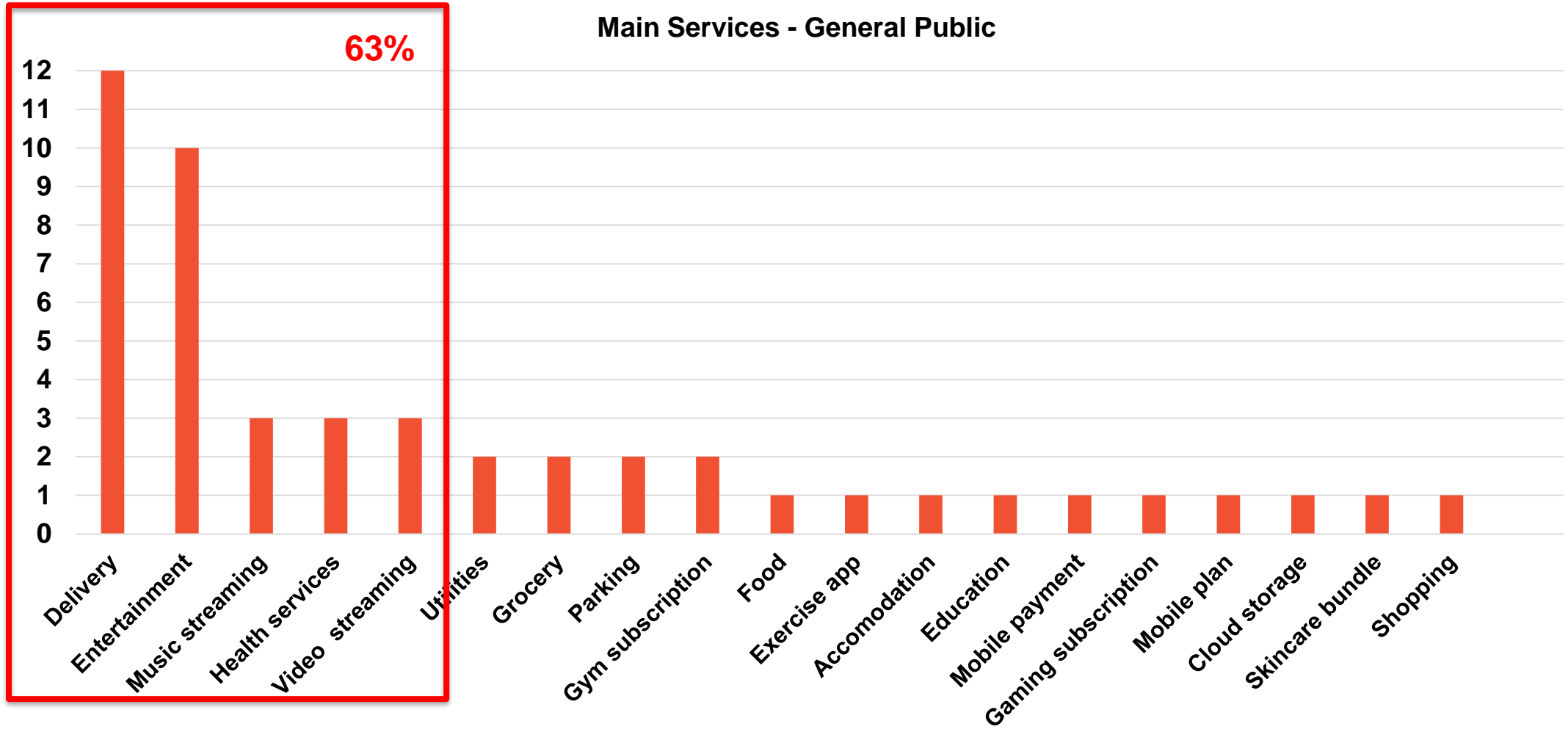
- **Data collection:** Stated Preference (SP) survey
- **Target respondents:** ordinary Australian travellers
- Online administration
- **Data analysis:** Discrete choice models (DCM) using stated preference (SP) data

Services proposed – General public

Main Services - General Public

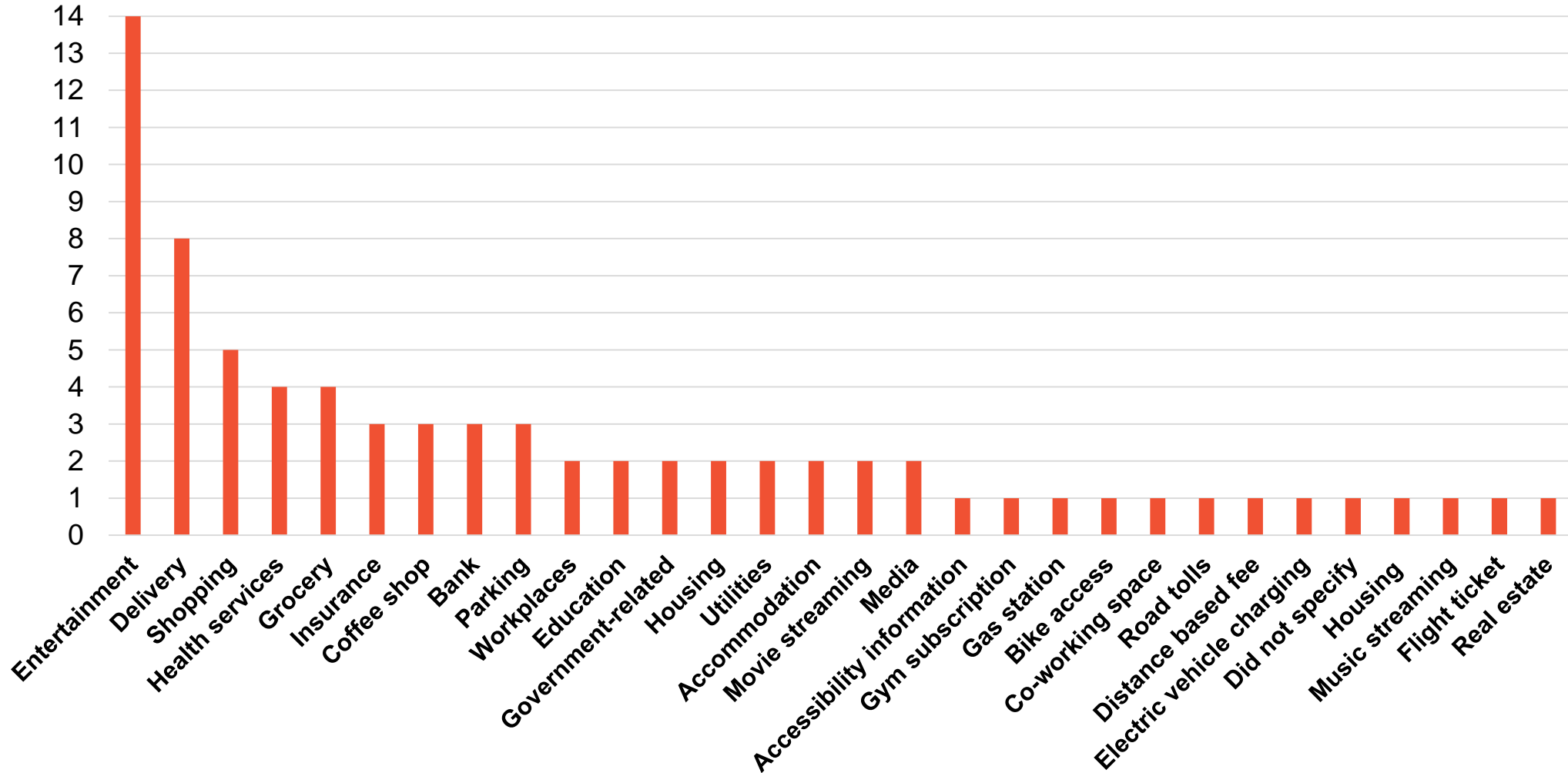


Services proposed – General public



Services proposed – Thought leaders

Main Services - Thought leaders



Highlights and conclusions

- **Two main categories proposed by interviewees (both groups):** Delivery and Entertainment (leisure activities, experiences)
- **Reasons for proposals?**
 - Delivery is often associated with transport (general public)
 - Leaders associate delivery with goods and general public with groceries
 - Entertainment: transport is a derived demand
 - According to interviewees: working from home changed travel patterns of commute travel
- **Though leaders** proposed non-mobility services that are not dealing with the customer directly but enabling the business model (insurance, banks)

Highlights and conclusions: Services proposed

- **Delivery:** Has become more attractive since COVID19; saves time for the users; convenient; usually attached to transportation; Sometimes related to basic needs and repeated activities (grocery).
 - Expected outcomes: Elasticities; MRS per unit of free delivery
- **Entertainment:** Travel patterns have changed since COVID19; The 5 day commute seems to be no longer a norm; All interviewees (general public) are doing WFH - bias; Transportation is now more linked to leisure and occasional trips
 - Expected outcomes: Elasticities; MRS per % of discount (or cashback)
- **Media subscription (video, music, game):** Already part of a subscription (e.g. monthly pay) and are used during on the go.
- **Gamification:** Loyalty points scheme to be traded or integrated to other platforms. traded for future transport, or to buy goods (grocery, shopping).

Stated choice experiment

- D-efficient design
- Pivot around current consumption
- Most prefer/Least prefer

- 1005 respondents across Australia
- 4 games/respondent
- August-September 2023

Part III: Your own multiservice plan

Based on the information you provided to us, we have designed different types of **multiservice plans** for you. Columns 1 and 2 give you different **multiservice plans**. Column 3 is a **Pay-As-You-Go plan** where you pay \$5 per fortnight for having access to all public transport modes, micromobility, car-sharing, getting discounts from Taxi and Uber services; and using a smart app to plan your journey, book the services, and manage your mobility bills. We would like you to compare and choose one of these options.

Scenario 1 (of 4)

	Your Current consumption	Plan A	Plan B	Pay-as-you-go
PUBLIC TRANSPORT (VICI MOBILE)	8 days	16 days of unlimited use	12 days of unlimited use	Pay-as-you-go
CAR SHARING	16 hours	20 hours	20 hours	\$ 7.60/hour
TAXI/UBER TRAVEL	0% discount	0% discount	0% discount	10% discount
MICROMOBILITY	80 minutes	0 minutes	60 minutes	\$1+ \$0.5/minute
DELIVERY	6 deliveries	0 deliveries	0 deliveries	\$3/delivery
MEDIA				\$10/subscription/Month
ENTERTAINMENT	0% discount	0% discount	20% discount, up to \$20 per month	20% discount, up to \$20 per month
POINT REWARDS	✗	☑	☑	☑
PRICE/MONTH (+ entertainment costs)	\$ 267.6	\$266	\$335	\$5
Which option do you most prefer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Which option do you least prefer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next

Thank you



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