RMIT UNIVERSITY | Centre for Urban Research

STARS
Shared mobility opporTunities And challenges foR European citieS

Governance systems to maximize car sharing's potential as sustainable transport: insights from theory and global practices

Luisiana Paganelli

PhD Supervisors: Prof. Jago Dodson, Dr. Chris De Gruyter, Dr. Elizabeth Taylor

Learning from the STARS: Findings & the Future of Car Sharing in Europe
13-14/02/2020
Bremen | Germany

potential benefits of car sharing

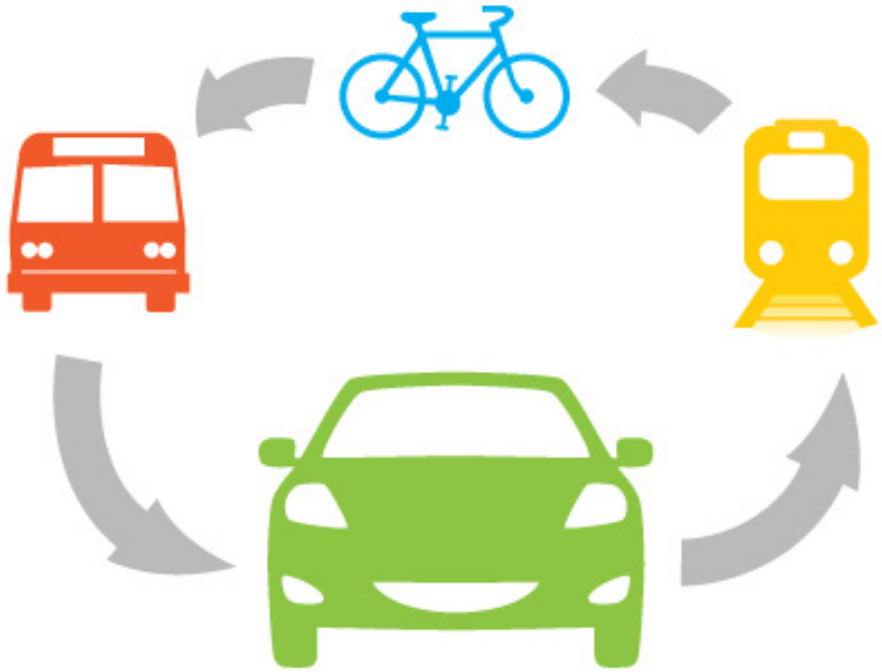
sustainable transport mode

alternative to the private car
potential to generate social, economic, environmental, transportation and land use benefits
reduce car dependence

- cost savings
- reduced vehicle ownership
- reduced VKT
- increased use of alternative transport
- lower emissions
- less need for parking spaces
- more efficient use of resources
- enhanced mobiity (induced trips)

(Correa, 2016; Enoch and Taylor, 2006; Kaspi et al., 2016; Kent et al., 2017; Martin and Shaheen, 2011; Millard-Ball et al., 2005; Shaheen et al., 2004, 2010; Solman and Enoch, 2005; UITP, 2002a, 2016, 2017a)

if integrated!!!!!



http://thecityfix.com/blog/new-carsharing-association-aims-to-reduce-car-ownership/

integrated with urban systems to be used for **combined mobility** and as a **complement to the wider transport system**

(Enoch and Taylor, 2006a; Firnkorn and Müller, 2011; Glotz-Richter, 2016; Huwer, 2004; Kaspi et al., 2016; Kent and Dowling, 2016; Millard-Ball et al., 2005; MOMO, 2011; Paganelli, 2013a; Shaheen et al., 2010; Solman and Enoch, 2005; UITP, 2016).

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unexplored topic

car sharing governance and integration

However, car sharing governance and integration remain
widely unexplored in transport studies and policy debates
(Akyelken et al., 2018; Caputo, 2012; Dowling and Kent, 2015; Kent and Dowling, 2016; Terrien et al., 2016)

Additionally, it is **not clear** to planners and decision-makers
how to integrate car sharing in a strategic, effective and comprehensive way
(Enoch and Taylor, 2006b; Paganelli, 2013a)

urgent and crucial
(Dia, 2017a; Kent and Dowling, 2013)

understand how governments deal with car sharing
(Paganelli, 2013a)

need to focus on governance and policies for CS
(Akyelken et al., 2018, p. 11; Dia, 2017a; Terrien et al., 2016a)

Relationship between **car sharing, integrated mobility and urban planning** = appealing topic for research
(Dia, 2017a; Kent and Dowling, 2013; Lyons and Davidson, 2016).

why?

implications of car sharing to cities

https://commons.wikimedia.org/wiki/File:Flag_map_of_Germany.svg

http://www.denniskoray.de/mitfahrgelegenheit-koln-ein-erfahrungsbereicht-von-dennis-koray/

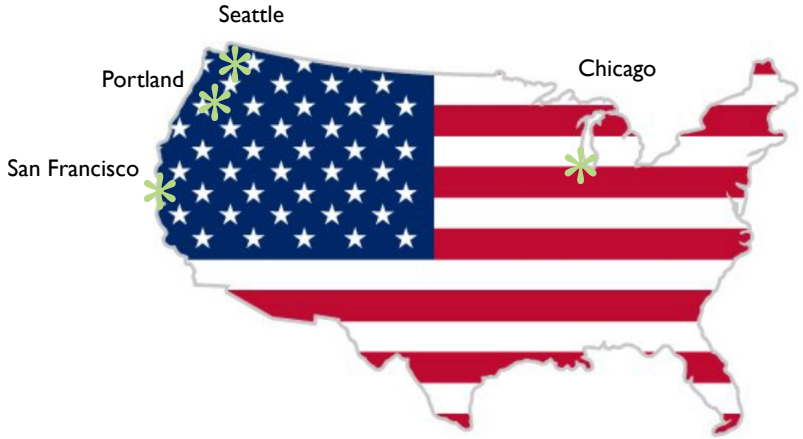
mitfahrgelegenheit.de
KLICKEN. FAHREN. SPAREN.

http://www.punkt3.de/artikel/536

Master thesis

Integration of car sharing and urban pllanning policies
(multiple cases study in the USA)

Paganelli, L., 2013. Integração entre o sistema de carro compartilhado e políticas públicas de planejamento urbano: estudos de casos múltiplos: São Francisco, Portland, Seattle e Chicago. Pontifícia Universidade Católica do Paraná, Curitiba. http://www.biblioteca.pucpr.br/tede/tde_busca/arquivo.php?codArquivo=2562

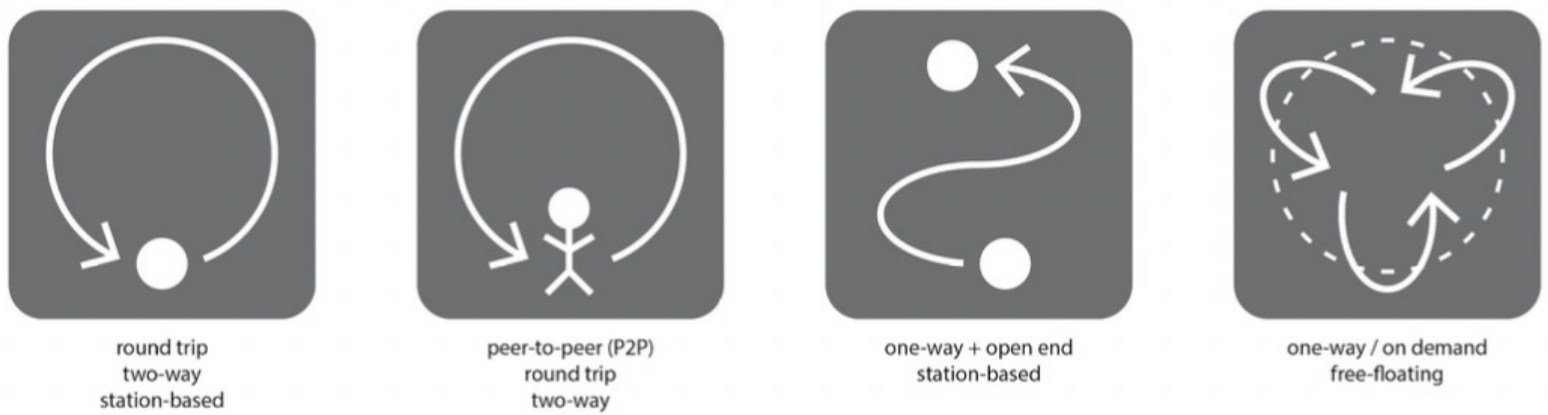


https://www.amazon.com/United-States-America-American-sticker/dp/B00B1Z8XOS

https://www.dataprom.com/en/1-brt-boardwalk-and-recycling-curitiba-make-the-most-innovative-city-in-the-world-says-the-guardian/

http://www.bemparana.com.br/noticia/379803/estudo-aponta-curitiba-com-indice-de-19-de-congestionamento

types of car sharing



Source: The author - adapted from Paganelli (2013, p.36)

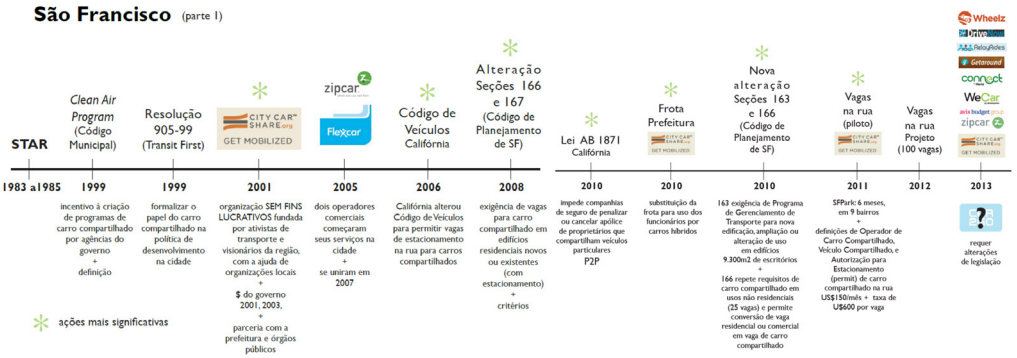
Paganelli, L., 2013. Integração entre o sistema de carro compartilhado e políticas públicas de planejamento urbano: estudos de casos múltiplos: São Francisco, Portland, Seattle e Chicago. Pontifícia Universidade Católica do Paraná, Curitiba. http://www.biblioteca.pucpr.br/tede/tde_busca/arquivo.php?codArquivo=2562

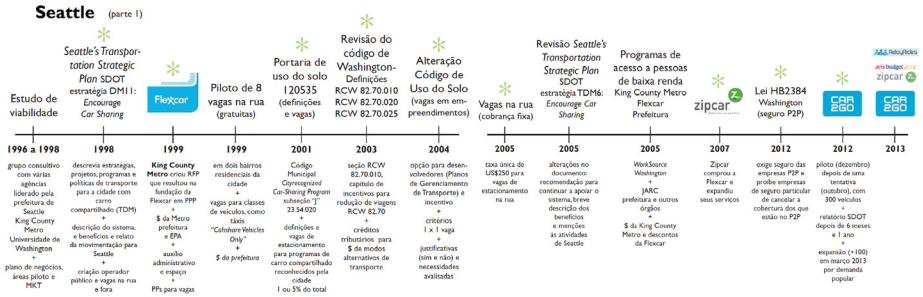
CS in USA

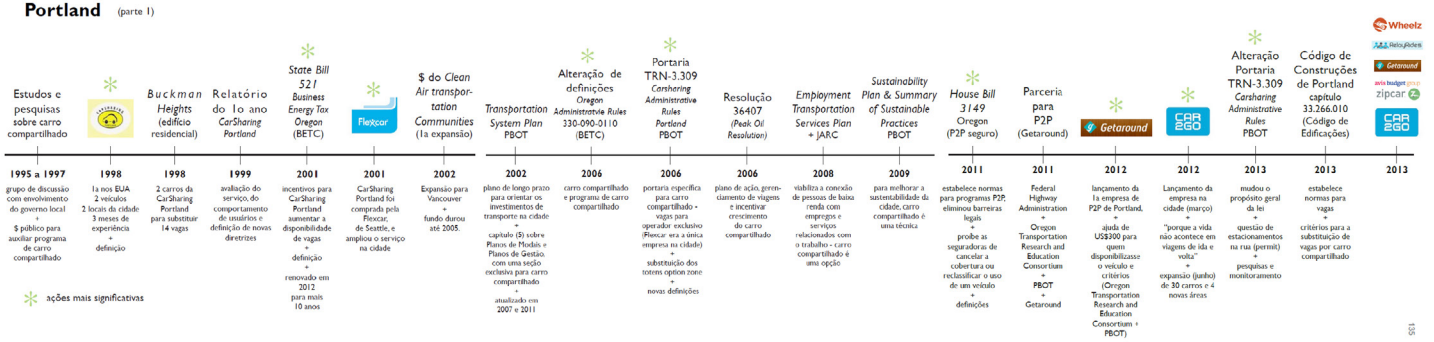
master

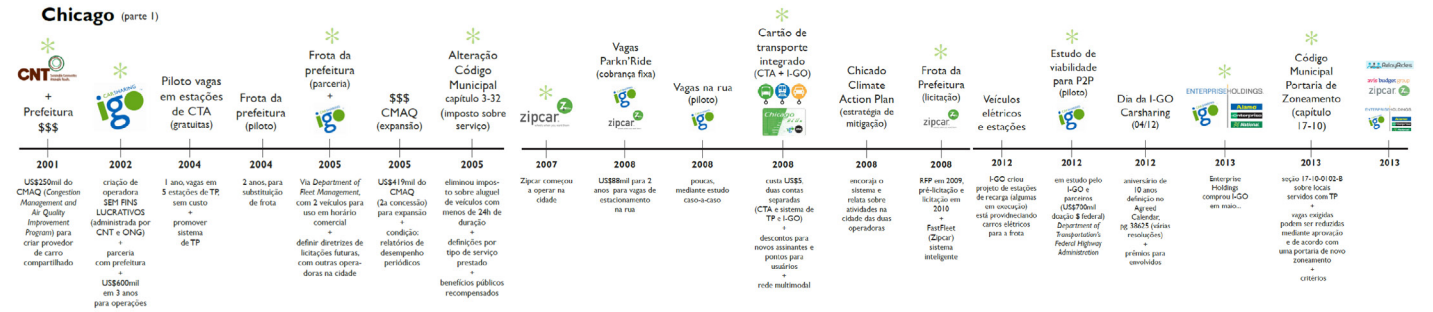
CS + PT + UP

governance









Paganelli, L., 2013. Integração entre o sistema de carro compartilhado e políticas públicas de planejamento urbano: estudos de casos múltiplos: São Francisco, Portland, Seattle e Chicago. Pontifícia Universidade Católica do Paraná, Curitiba. http://www.biblioteca.pucpr.br/tede/tde_busca/arquivo.php?codArquivo=2562

Photos: Luisiana Paganelli (jan/2020)

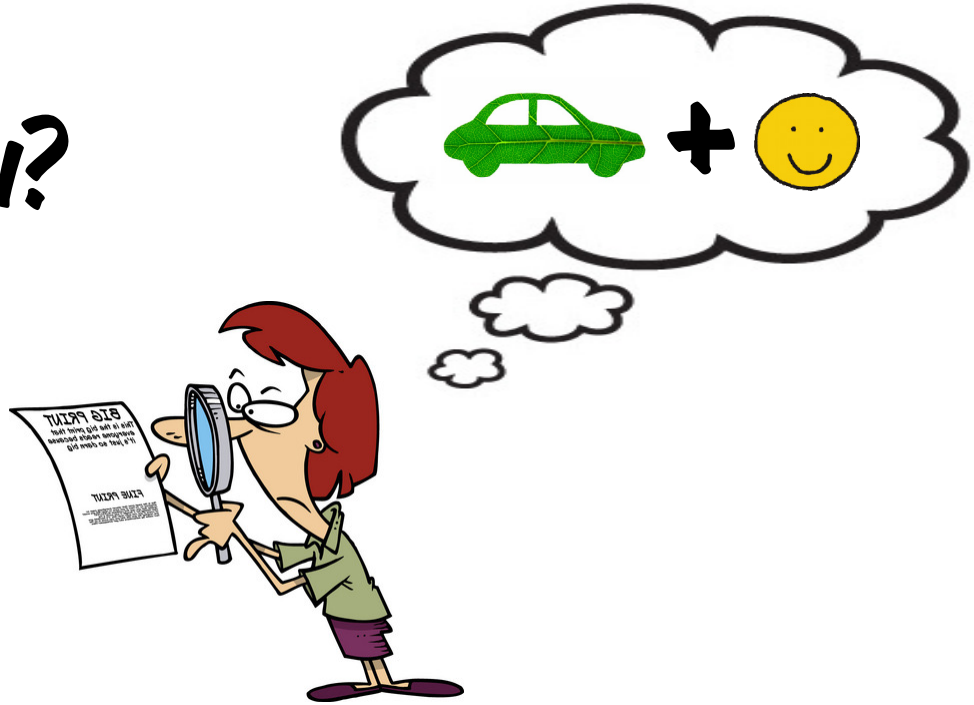
my PhD research...

car sharing

- is **not a "panacea"** of urban mobility issues
- but can be used as a **tool to create more sustainable** urban areas...

  (Glotz-Richter, 2012; Millard-Ball et al., 2005; Paganelli, 2013b, 2013a; Solman and Enoch, 2004)
- **if** it is explored strategically and **implemented in an integrated** way.
- this is an opportunity to include the car positively in governancre and policies for urban transport.

How?



my PhD research...

how should car sharing be implemented to be sustainable?

"put governance, integration and car sharing into conversation"

* analysis from an urban planning perspective

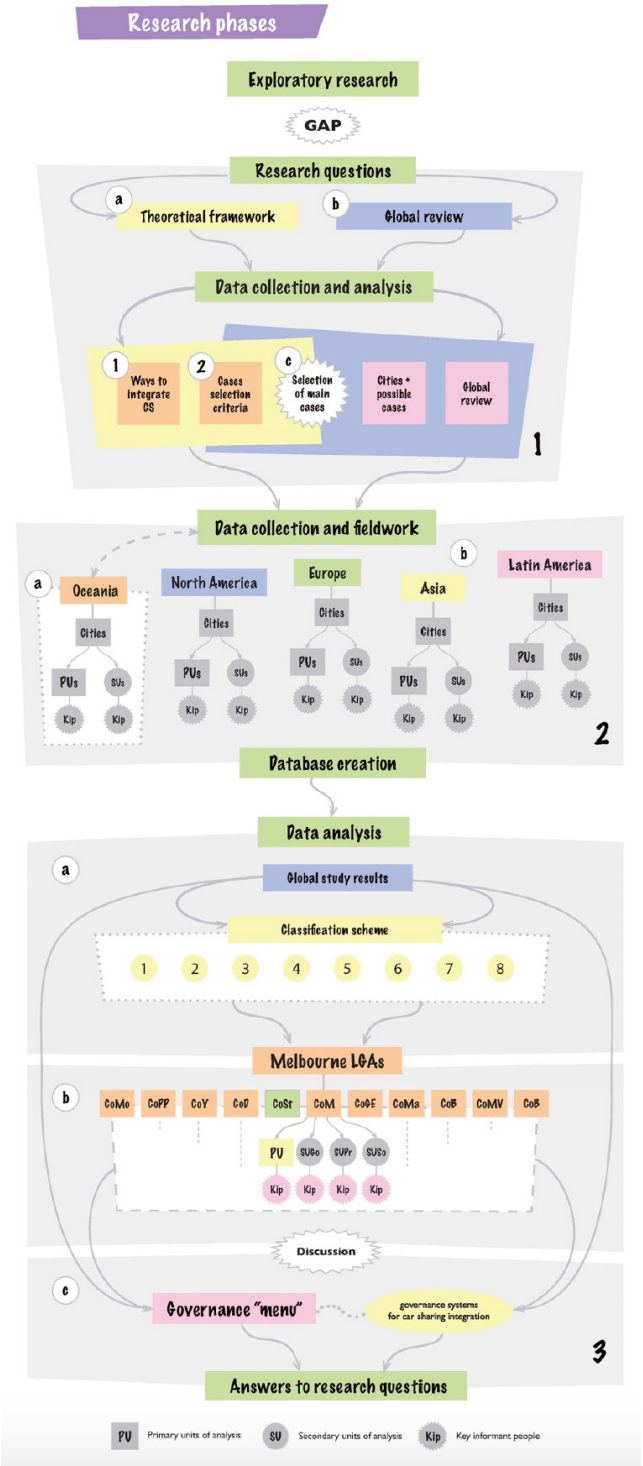
overall goal: understand how governance systems can enable car sharing to work as sustainable transport in different types of cities, or which conditions are required for this to happen.

- understand what this integration means
- identify the mechanisms that should be implemented to achieve it
- where they are implemented
- how they are conceived
- how they can be measured and evaluated - impacts and benefits

methodology

This research is using an
instrumental multiple cases study
+
combination of research methods
(Denscombe, 2014, p. 56; Flyvbjerg, 2006; Gil, 2009; Stake, 2005; Yin, 2014)

due date:
dec/2020



governance

In the context of this study, **governance** is understood as a system of:

- practices
- "rules"
- processes
- legal tools
- initiatives
- actors (social and political + public and private)
- interactions, partnerships
- infrastructures and networks

that can be applied in different levels and scales (Gupta et al., 2015).

theoretical framework

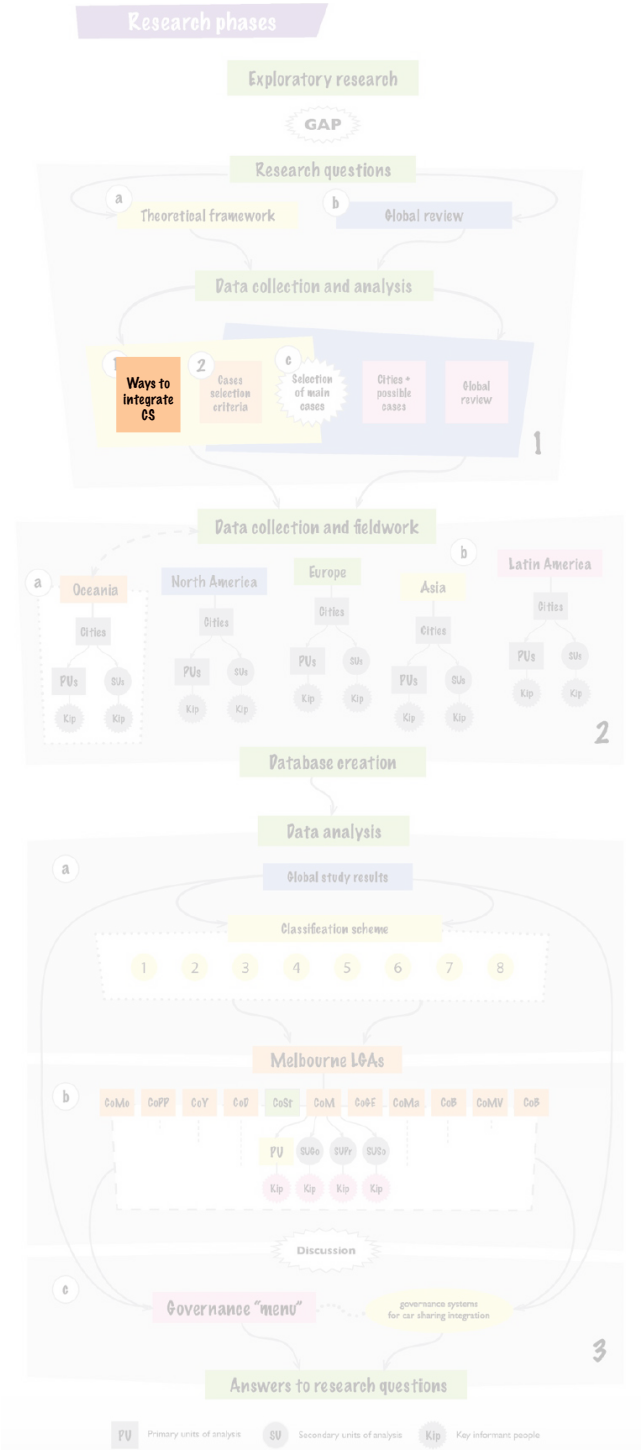
Ways to integrate CS

- understand governance for car sharing and integration
- understand what this integration means
- identify existing or possible arrangements and measures

literature review

desktop review

arrangements and initiatives for car sharing governance and integration



review...

*focused on car sharing governance and integration

literature + desktop review worldwide practices

master

"How" and "Where"?

scholarly literature

grey literature

governance for car sharing

- distributed randomly in different documents or sources of related content (mostly in grey literature)
- with potential to be organized in distinct categories

IMAGE: http://www.pinterest.com.au/pin/196680708698352089/.jpg

what I concluded...

- decision makers could benefit from **guidelines** that help to create initiatives aimed at recognizing car sharing and integrating it with urban systems.
- however, to my knowledge, **no organized document** classifying these initiatives has emerged so far...
- an **initial classification** of possible mechanisms and arrangements of governance for car sharing could set a **foundation for this "guide"** and trigger an improvement of car sharing integration in practice.

what I did...

- **organized and categorized** the arrangements and measures that can be adopted to integrate car sharing that were identified.
- developed a **preliminary classification scheme** of governance for car sharing integration with urban planning and transport systems.

Paganelli, L., 2019. Classifying governance initiatives for an effective integration of car sharing with urban planning and transport systems, in: AESOP 2019 Conference - Book of Papers - Planning for Transitions. Presented at the AESOP Annual Congress - Planning for Transition, p. 10.

classification scheme

This classification scheme divides governance for car sharing in 8 categories that:

- consider **different features** related to the system's development and implementation
- reflect **characteristics of the places** where car sharing operates
- indicate the **natures** of possible arrangements, initiatives, policies and regulations for its integration and management.

used as conceptual basis for PhD data collection and analysis

Paganelli, L., 2019. Classifying governance initiatives for an effective integration of car sharing with urban planning and transport systems, in: AESOP 2019 Conference - Book of Papers - Planning for Transitions. Presented at the AESOP Annual Congress - Planning for Transition, p. 10.

classification scheme

1 Enablers of car sharing development and integration

Basic conditions and characteristics required from cities for the adoption, development and consequent effective integration of car sharing.

2 Awareness and capacity building

- Acknowledgement/awareness
- Understanding and recognition of car sharing
- Help from advocates and champions
- Lessons from other cities and/or similar experiences

3 Public support

- Marketing
- Administrative
- Financial
- Technical
- Regulatory
- Operational

4 Role of actors for governance and integration

And their involvement in the implementation of car sharing

- Institutional arrangements and regulatory bodies
- Agreements and partnerships
- Local community, civil society associations, coalitions/consortiums or taskforces
- Champions and advocates
- Nationall and international projects

5 Plans, policies and regulations

Strategies that recognize, formalize and incorporate car sharing as a transport mode into planning documents and procedures, encompassing all types of car sharing that operate locally.

- In the national/federal context
- In the regional context
- In the local context

classification scheme

6 Public space and infrastructure

- Parking spaces in public or private areas
  - On-street
  - Off-street
  - On-site
- Approach to allocate car sharing parking spaces
  - Financial issues
  - Physical issues
  - Process issues
- Car sharing vehicles' flow in the streets

7 Integration of car sharing with the local transport system

- Physical integration
  - Alternative transport
  - Other MaaS modes
- Combined mobility platforms
  - Trip planners
  - Transport card
  - Mobility Apps
- Gamification strategies

8 Performance and evaluation

- Requirements for public support
- Data sharing
- Multimodal surveys
- Evaluation of effectiveness of the governance systems implemented

classification scheme

Session: Planning for accessibility and sustainable mobilities

Classifying governance initiatives for an effective integration of car sharing with urban planning and transport systems

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Abstract: Car sharing is a service in which members can access a car without having to own it. It is a relatively mature car-based component of the 'mobility as a service' (MaaS) system that has potential to work as sustainable transport when effectively integrated with urban systems and used as a complement to the transport network. Initiatives to integrate car sharing are relatively recent and not yet widely practiced, but they have been successfully implemented by some cities and there is an increasing interest in adopting them worldwide. However, this topic remains widely unexplored in transport studies and policy debates. This paper aims to address governance for car sharing integration by clarifying what this integration means, underlining its significances, and by classifying mechanisms and measures that can be adopted, mostly by local authorities, to achieve it. This work was based on literature reviews and on studies of practical examples focused on governance for car sharing developed by the author for her master and Ph.D. (ongoing) researches. The framework introduced here may provide insights on elements that should be considered while formulating strategies to incorporate car sharing into urban systems. It is also an opportunity to reflect on a significant, but relatively unexplored, topic in transport discourse.

Keywords: car sharing, governance, transport planning, integrated mobility.

Introduction

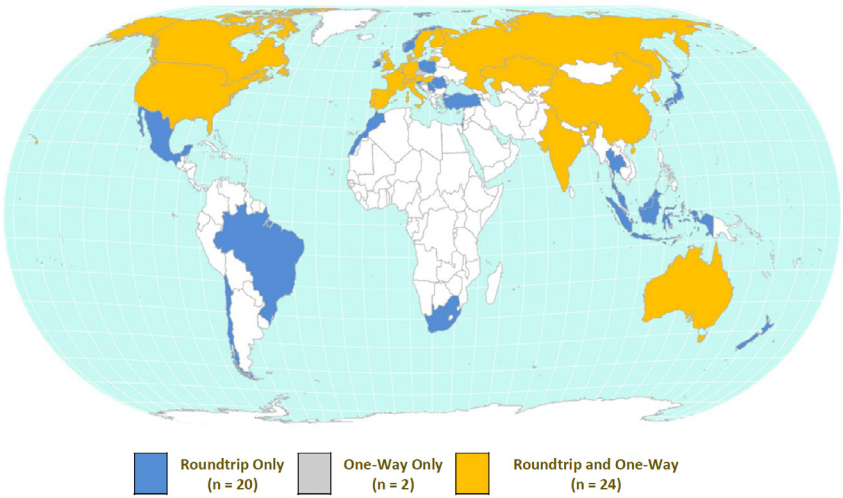
Overcoming car dependence still remains as a common global challenge faced by cities, especially the ones that are about to accommodate significant urban population growth in the next few years. At the same time, the disruptive emergence of the new mobilities, or 'mobility as a service' (MaaS) (Sochor et al., 2017), particularly car-based modes, is adding more pressure to an apparently defeated 'anti-car' urban planning system in most of the cities around the world. Meanwhile, "the real 'disruption' needed" (Stone and Kirk, 2017, p. 140), is to reshape cities with a new approach to transport planning and policy (Iacobucci et al., 2017; Marsden and Docherty, 2013) that "enables rather than frustrates" (Dodson and Mees, 2003, p. 33; Marsden and Docherty, 2013, p. 213) the achievement of more sustainable cities (Dodson and Mees, 2003; Legacy, 2017; Marsden and Reardon, 2017).

This change could begin by facing the disruption that is assailing the "current way of life" (Kent, 2013), and by confronting "orthodox tools, instruments, methods and framings" (Legacy, 2017, p. 180) of planning to reshape cities in the future accordingly. In this sense, Smolnicki and Sołtys (2016, p. 814) emphasize that, although the structural results of a "car-ownership-oriented-century" are widely recognized, the implications of a broad use of shared automobiles still need to be

global study

Figure 7: Global car sharing operations taken from the interactive map on https://carsharing.org/carsharing-world-map/
Source: Carsharing Association CSA (2020)

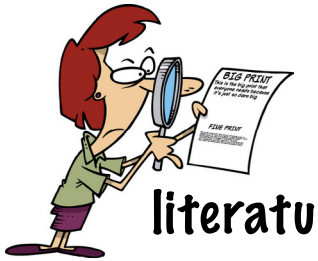
One-Way and Roundtrip Global Carsharing Map



*** Data depict October of each even numbered year. Numbers do not include P2P carsharing. "n" denotes the number of countries surveyed in each respective region. One-way includes both station-based and free floating models.**

Source: Shaheen, S., Cohen, A., Jaffee, M., 2018a. Innovative Mobility: Carsharing Outlook - Spring 2018. - p. 6

- focused on governance and integration issues
- to assess international cities that have car sharing and related policies
- to understand how car sharing is implemented in different parts of the world



literature + desktop review

scholarly literature

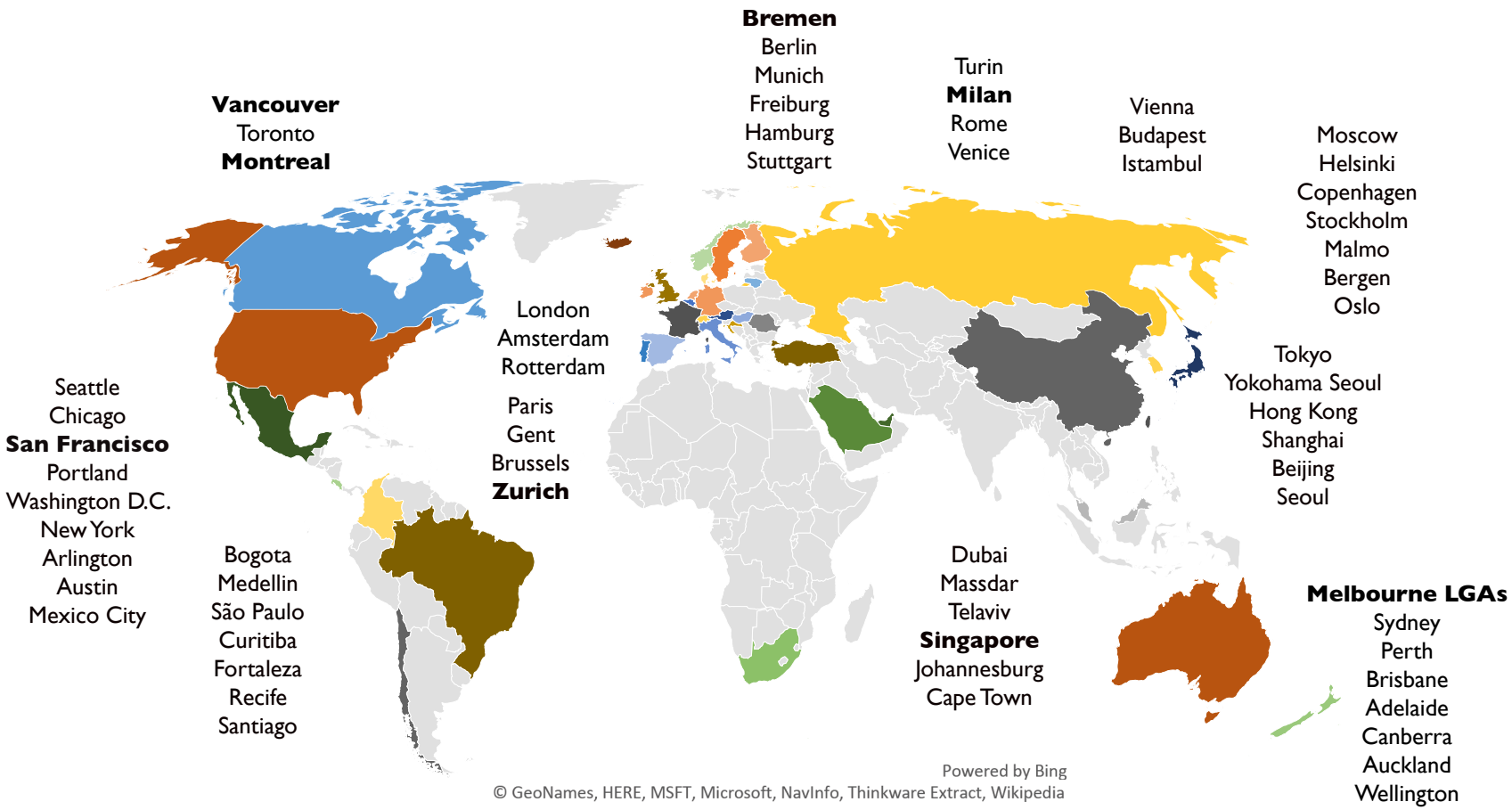
master

grey literature

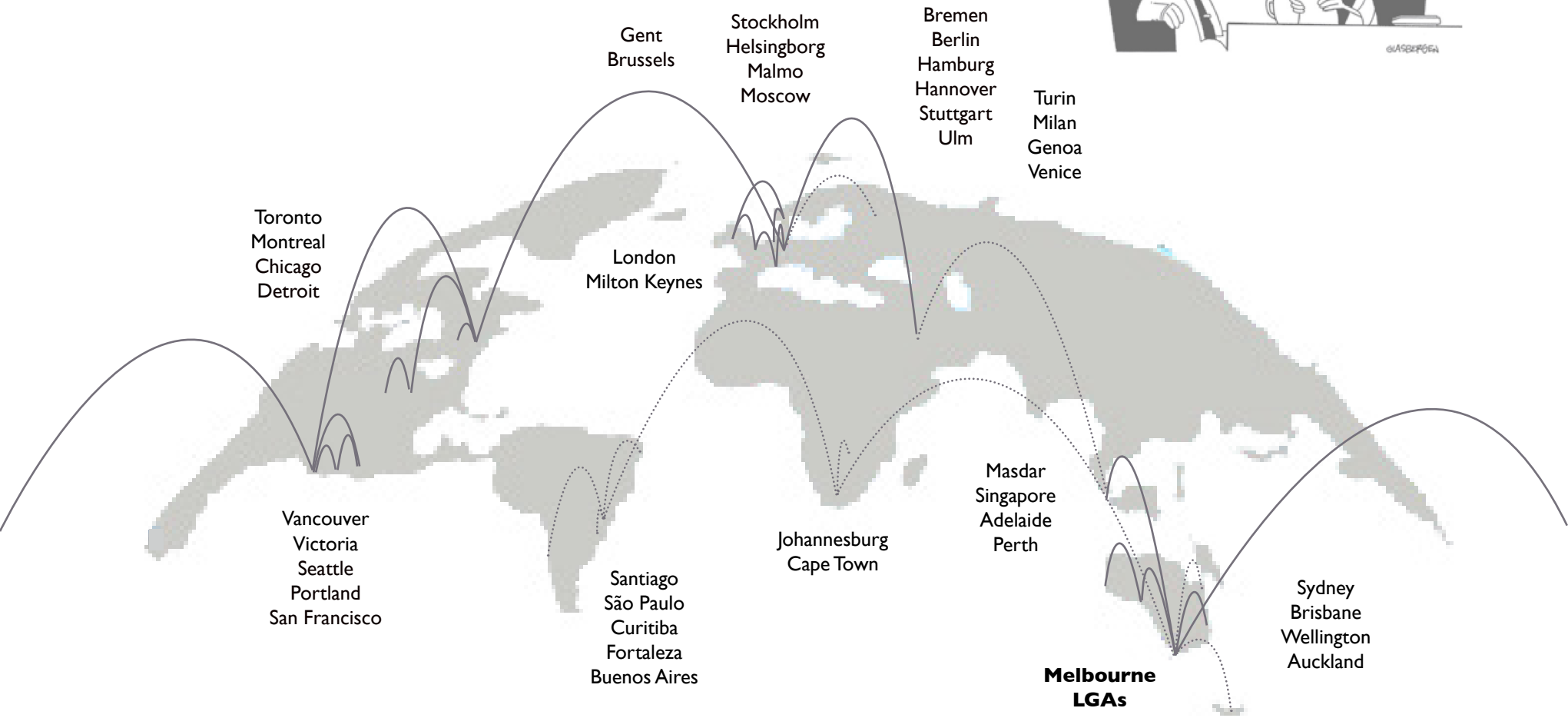
worldwide practices

global study

potential cases + cities that could provide opportunities to learn



global fieldwork



tested and validated classification scheme

thank you!

to all the amazing people who have been helping me develop this research...

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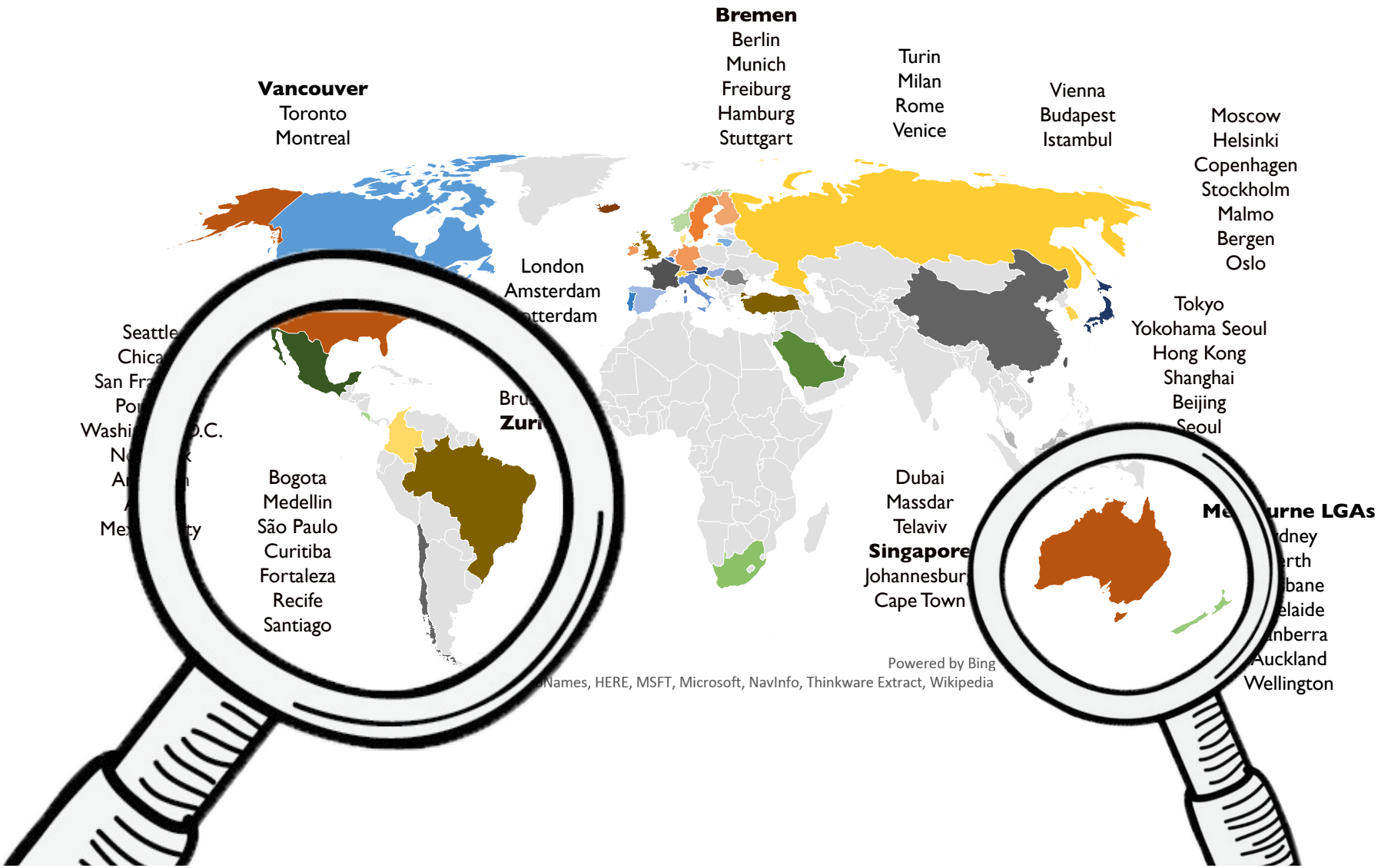
special focus on ...



Australia

population: ~25million
(growing fast... in the big cities)

area: 7.692.000 km²

Australia

car-oriented
CAR DEPENDENT
cultural barriers to share

Why car sharing had a slow start in Australia - and how that's changing

October 29, 2018 5.55am AEDT

Private cars with built-in sharing technology will soon be available in Australia. Shutterstock

Email
Twitter 26
Facebook 24
LinkedIn
Print

Car sharing arrived on the Australian scene in the early 2000s. These are commercial services that give people access to vehicles they can rent by the hour.

Services in Australia currently include GoGet and Car Next Door. While GoGet has a fleet of vehicles available for rent, Car Next Door supports private vehicle owners renting out their cars to others in the community (kind of like Airbnb).

Car sharing is now an established transport option in most major Australian cities, but it's faced its fair share of teething problems. Some of these are unique to Australia, with its powerful system of private car dependency. We're now on track to overcome many of these issues, but more work is required to really make Australian car sharing a success.

Read more: 1,000 cars and no garage – why car-sharing works

Why is car sharing important?

Author

Jennifer Kent
Research Fellow, University of Sydney

Disclosure statement

Jennifer Kent does not work for, consult, own shares in or receive funding from any company or organisation that would benefit from this article, and has disclosed no relevant affiliations beyond their academic appointment.

Partners

THE UNIVERSITY OF SYDNEY

Australia

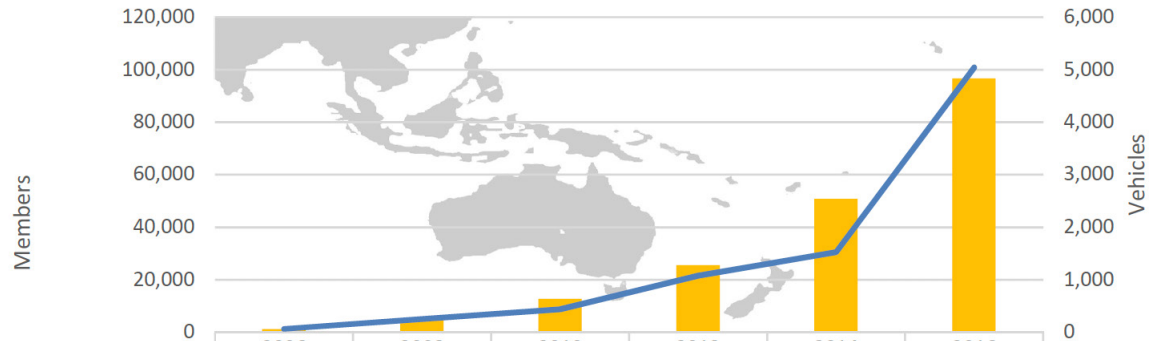
since 2003

car sharing
car share

Australia

Regional Carsharing Market Trends

Oceania Trends (n=2)



	2006	2008	2010	2012	2014	2016
Members	1,130	5,210	12,750	25,500	50,700	96,600
Compound Annual Member Growth Rate (2 yr)	0%	115%	56%	41%	41%	38%
Vehicles	65	255	440	1,080	1,524	5,040
Compound Annual Fleet Growth Rate (2 yr)	0%	98%	31%	57%	19%	82%
Member-Vehicle Ratio	17.4	20.4	29.0	23.6	33.3	19.2

Source: Shaheen, S., Cohen, A., Jaffee, M., 2018a. Innovative Mobility: Carsharing Outlook - Spring 2018. - p. 4

Australia

Car Sharing Policy

Purpose

The objectives of the Car Sharing Policy are to increase use of car sharing, and to ensure that the City's car sharing program is well-governed and transparent.

Specific objectives include

- **using on-street parking spaces more efficiently**: by replacing the parking demand created by underused private vehicles
- **reducing vehicle traffic and greenhouse emissions**: by reducing vehicle kilometres travelled, and shifting travel to more fuel efficient vehicles
- **supporting the local economy:** by reducing the need of businesses and individu
  private vehicle and car space
- **increasing social inclusion:** by enabling access to a variety of ve
  not otherwise afford them
- **increasing health:** as people walk and cycle mo

Scope

This policy applies to car share spaces located

1. Eligibility of a car share operator

The City will allocate car share spaces only to car s

To qualify, the operator must:

i) Have, or be developing, a network of cars in loc members.

ii) Allow any licensed driver over age 18 to join, subj ble creditworthiness and driving history checks.

iii) Supply an internet and phone-based booking system available to members 24 hours per day, allowing immediate booking of vehicles.

iv) Offer booking durations of one hour or less.

v) Ensure that no vehicle is booked for longer than four days unless a replacement vehicle is provided for the space.

vi) Prohibit the routine long-duration reservation or exclusive use, including overnight use, of a car sharing space by any one user, either individual or business.

vii) Confirm in writing their acceptance of the obligations set out in this policy.

city of villages

Routledge
Taylor & Francis Group

2016

URBAN POLICY AND RESEARCH, 2016
VOL. 34, NO. 3, 256–268
http://dx.doi.org/10.1080/08111146.2015.1077806

"Over 1000 Cars and No Garage": How Urban Planning Supports Car(Park) Sharing

Jennifer L. Kent[a] and Robyn Dowling[b]

[a]Faculty of Architecture, Design and Planning, Urban and Regional Planning and Policy, The University of Sydney, Sydney, Australia; [b]Faculty of Architecture, Design and Planning, The University of Sydney, Sydney, Australia

2020 Connected

CITY OF SYDNEY

2015

Transport Policy 40 (2015) 58–64

Contents lists available at ScienceDirect

Transport Policy

journal homepage: www.elsevier.com/locate/tranpol

Practice and public–private partnerships in sustainable transport governance: The case of car sharing in Sydney, Australia

Robyn Dowling [a,*], Jennifer Kent [b]

[a] Macquarie University, Sydney, NSW 2109, Australia
[b] The University of Sydney, Sydney, NSW 2006, Australia

CrossMark

Car-Share Permits Information Guide

This information is to assist prospective car-share businesses to understand the assessment framework for Car-Share Permits in Brisbane. For full details regarding the Regulated Parking Permit Local Law 1996, or to find out about parking rules and regulations in Brisbane, please visit www.brisbane.qld.gov.au and search parking permits. A map displaying where regulated parking permit scheme areas (including traffic areas) in Brisbane is available here. For information about 'where to park' refer to www.brisbane.qld.gov.au/where-park.

Brisbane City Council Regulated Parking Permit Scheme

Regulated parking permits are used to allow vehicles to park in regulated parking permit scheme areas contrary to area-wide or signed time limits, subject to specific conditions and eligibility requirements.

Council regulates parking in built up areas to protect neighbourhoods from becoming congested with commuter vehicles. It discourages the use of private vehicles and encourages the use of public and active transport, in high density areas. Regulated parking permits can help residents in regulated parking permit scheme areas to legally access kerbside parking near their homes without being subject to parking fees or the same parking time-limits as other motorists.

While a regulated parking permit scheme can improve opportunities to obtain parking, it does not guarantee parking availability.

Council recently introduced a new digital parking permit system that allows instant application
a wider range of parking permits. One of the new permit types is a car-share

, and car-share businesses
ehicle use. The introduction
ovide their customers with

vehicles legally?

esponsible for making sure the
ors must ensure their customers
at different times of the day. If
oved. This may involve directing
y, issuing a warning notice or
combination of these actions.

necessary, Council
the car-share operator to remove
infringement notice, authorising the towing of the vehicle,

How much do Car-Share Permits cost?

The current car-share application fee as published in Council's Annual Plan and Budget 2019-20 is $400 per registered vehicle for a permit that is valid for 12 months.

(Fees may change without notice. Please refer to Council's website for the up to date, published fees and charges)

Refunds: Council will not refund a permit application fee, in full or in part, where the permit has been revoked or refused on the basis the permit holder has used a permit contrary to the conditions of use.

BRISBANE CITY

Dedicated to a better Brisbane

Sydney

Photos: Luisiana Paganelli (jan/2020)

Melbourne LGAs

Population: 4.963.349

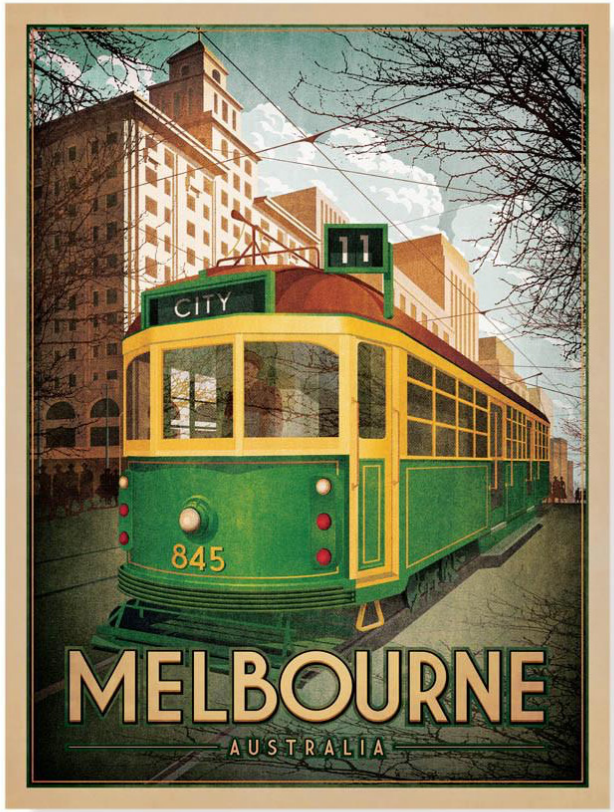
(ABS, 2018)

Melbourne LGAs

Melbourne Transport sytem

since 1885

PUBLIC TRANSPORT VICTORIA PT>



Designed and made in Melbourne by Harper and Charlie.
https://melbournalia.com.au/products/harpercharliewclasstramprint

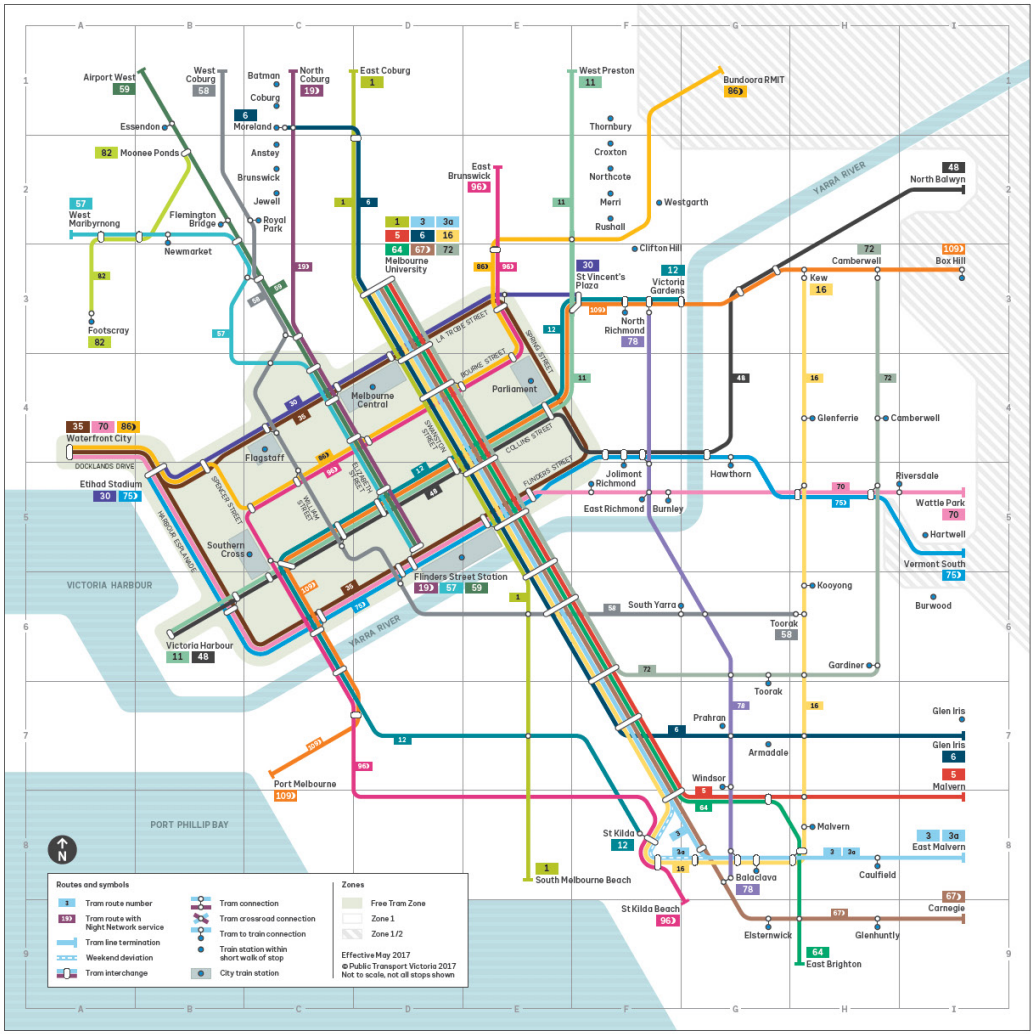
Melbourne Tram network

claimed as the:
"larget urban tram network in the world"

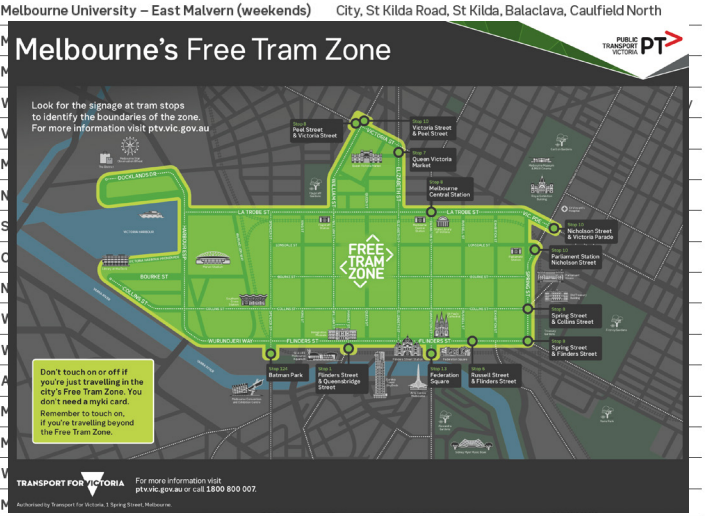
- 250 km of double track
- ~500 trams
- 24 routes

yarra trams

Melbourne tram network



Tram routes		Via
1	East Coburg – South Melbourne Beach	Lygon Street, Brunswick, City, South Melbourne
3	Melbourne University – East Malvern (weekdays)	City, St Kilda Road, Balaclava, Caulfield North
3a	Melbourne University – East Malvern (weekends)	City, St Kilda Road, St Kilda, Balaclava, Caulfield North
5	M	
6	M	
11	W	
12	V	
16	M	
19	N	
30	S	
35	C	
48	N	
57	W	
58	W	
59	A	
64	M	
67	M	
70	W	
72	M	
75	Vermont South – Etihad Stadium Docklands	Burwood, Hawthorn, Bridge Road, Richmond, City
78	North Richmond – Balaclava	Chapel Street, South Yarra, Prahran, Windsor
82	Moonee Ponds – Footscray	Droop Street, Maribyrnong Road
86	Bundoora RMIT – Waterfront City Docklands	Preston, High Street, Northcote, Collingwood, City
96	East Brunswick – St Kilda Beach	Nicholson Street, Fitzroy, City, Albert Park
109	Box Hill – Port Melbourne	Whitehorse Road, Mont Albert, City, Southbank



Tram destinations

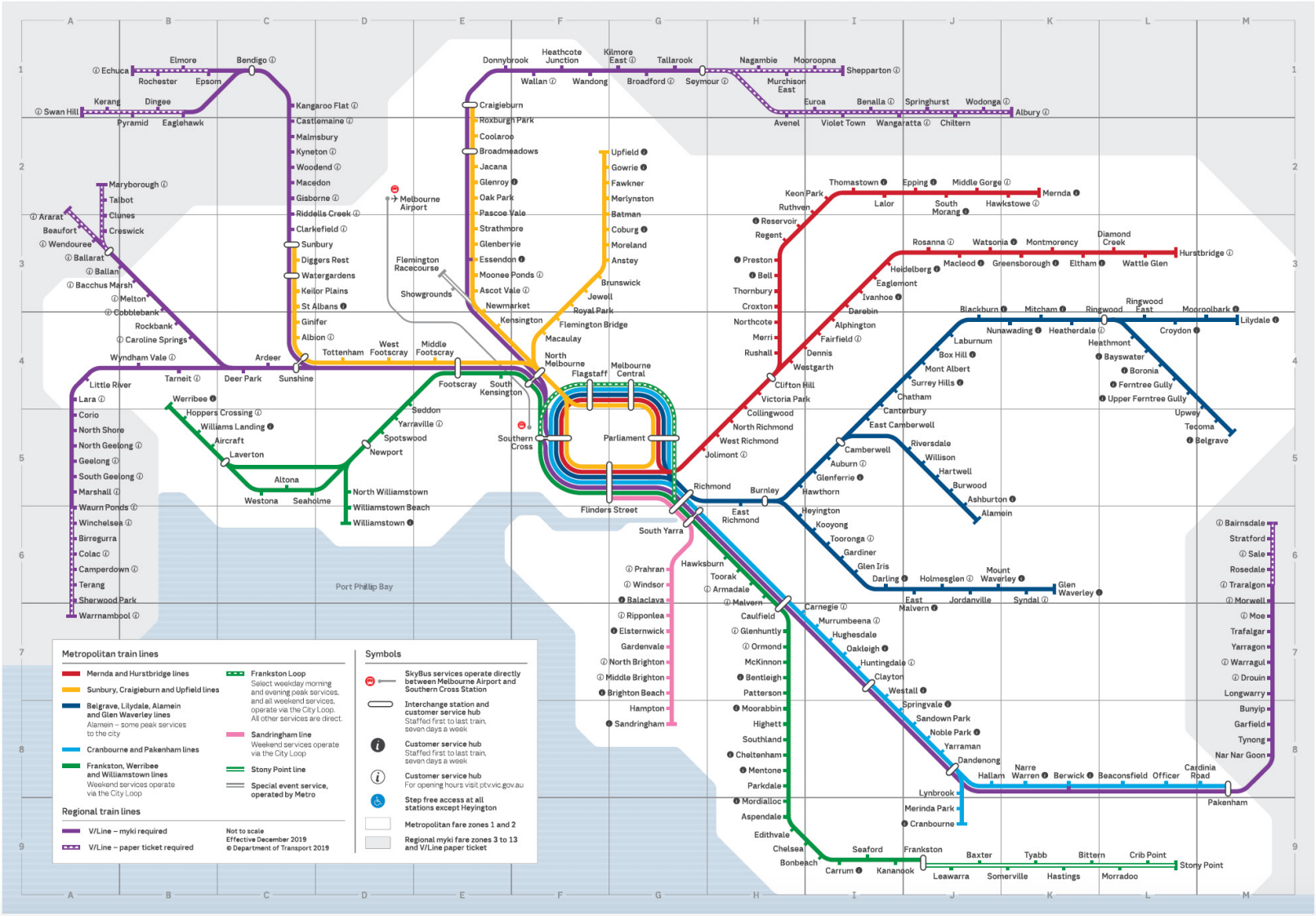
Airport West	B1	East Malvern	I8	Moreland	C1	Toorak	H6
Balaclava	G8	Etihad Stadium	B5	North Balwyn	I2	Vermont South	I5
Box Hill	I3	Flinders Street Station	D5	North Coburg	C1	Victoria Gardens	G3
Bundoora RMIT	G1	Footscray	A3	North Richmond	F3	Victoria Harbour	B6
Camberwell	H3	Glen Iris	I7	Port Melbourne	C7	Waterfront City	A4
Carnegie	I9	Kew	H3	South Melbourne Beach	E8	Wattle Park	I5
East Brighton	H9	Malvern	I7	St Kilda	F8	West Coburg	B1
East Brunswick	E2	Melbourne University	D3	St Kilda Beach	G9	West Maribyrnong	A2
East Coburg	D1	Moonee Ponds	B2	St Vincent's Plaza	F3	West Preston	F1

VICTORIA State Government

PTVH2153/17. Authorised by Public Transport Victoria, 750 Collins Street, Docklands

For more public transport information visit ptv.vic.gov.au or call 1800 800 007.

Victorian train network



PUBLIC TRANSPORT VICTORIA

photo: PTV

Photo:https://en.wikipedia.org/wiki/Melbourne_Bike_Share#/media/File:Melbournebikeshare_station_Macarthur_St_2010.jpg

photo: PTV

Uber

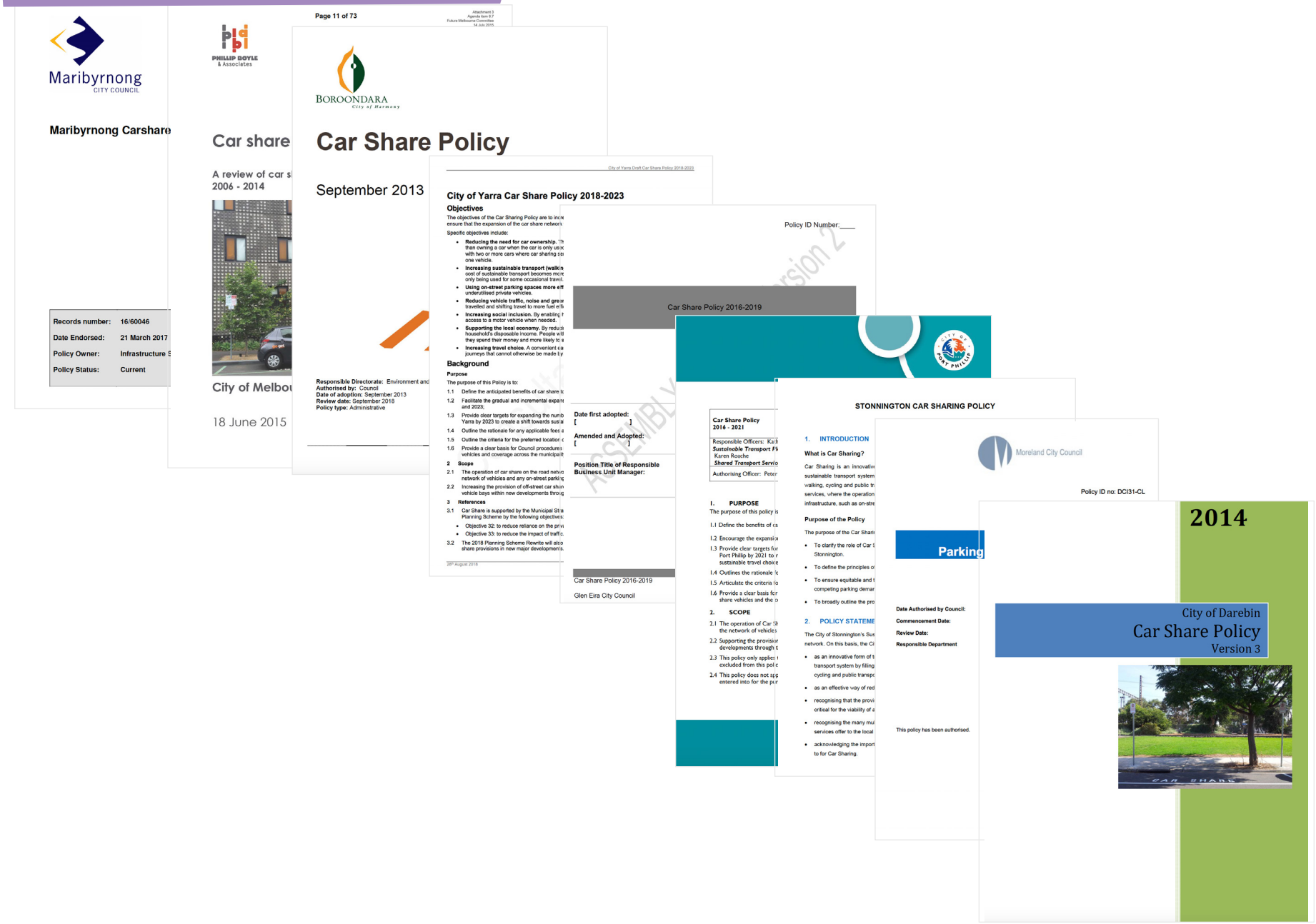
DiDi

shebah
ALL WOMEN RIDESHARE

Car sharing in Melbourne LGAs

since 2004

Melbourne LGAs



Melbourne LGAs

Photos: Luisiana Paganelli (2019/2020)

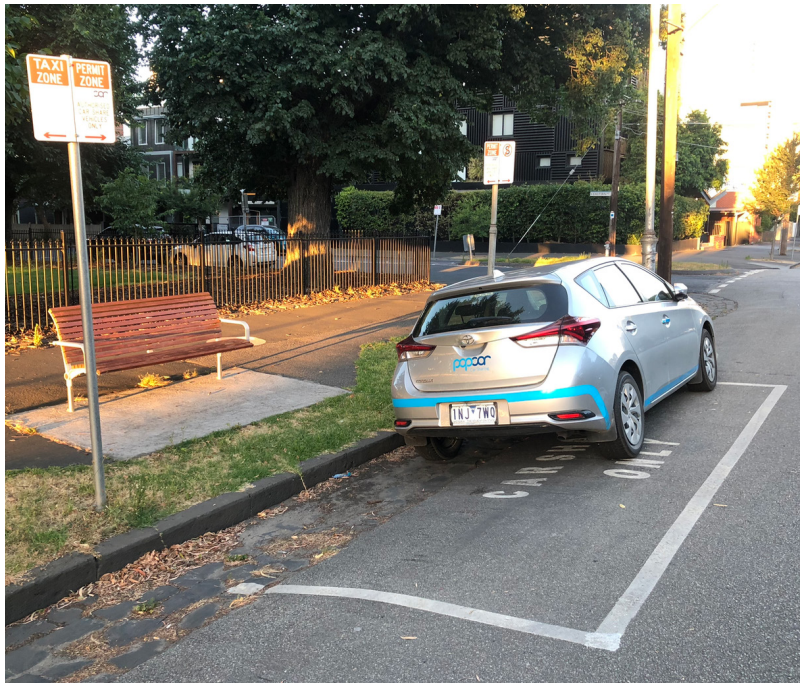
'Like Airbnb, but for cars': Melbourne council leads way in setting aside parking spots for peer-to-peer car sharing

By social affairs correspondent Norman Hermant

Posted Sat 7 Oct 2017, 6:01am

PHOTO: Geoffrey Dunstan rents out his car through the peer-to-peer sharing company Car Next Door. (ABC News: Danielle Bonica)

https://www.abc.net.au/news/2017-10-07/airbnb-for-cars-parking-spots-set-aside-for-peer-to-peer-sharing/9018306



Car sharing in Australia...

iMOVE

Home | About iMOVE Australia | News and Articles | iMOVE Projects | Meet smart mobility experts

Free-flow parking for car-sharing

Home / Project / Free-flow parking for car-sharing

https://imoveaustralia.com/project/free-flow-parking-for-car-sharing/

MaaS in Australia...

itsaustralia
Intelligent Transport Systems

Mobility as a Service
in Australia
Customer insights and opportunities

Vision for MaaS in Australia

01 Promotes the efficient movement of people and goods to improve safety, and productivity, reduces congestion and environmental impacts

02 Encourages a vibrant and competitive industry sector and supports effective MaaS deployment

03 Builds on the existing public transport network and supports improved access to transport options for customers

04 Enhances transport access and mobility options to customers across metropolitan and regional centres that Australians live and work in

05 Is inclusive and responsive to the socio-economic and mobility needs of all customers, balancing innovation and improvements against equitable access for all Australians

06 Offers interoperable open access solutions that encourage competition and enables effective data sharing while protecting privacy and security concerns.

07 Aims to be more convenient than individual use of private vehicles

https://www.its-australia.com.au/maasreport/

What's next?

UITP ADVANCING PUBLIC TRANSPORT

UITP Global Public Transport Summit Melbourne 2021

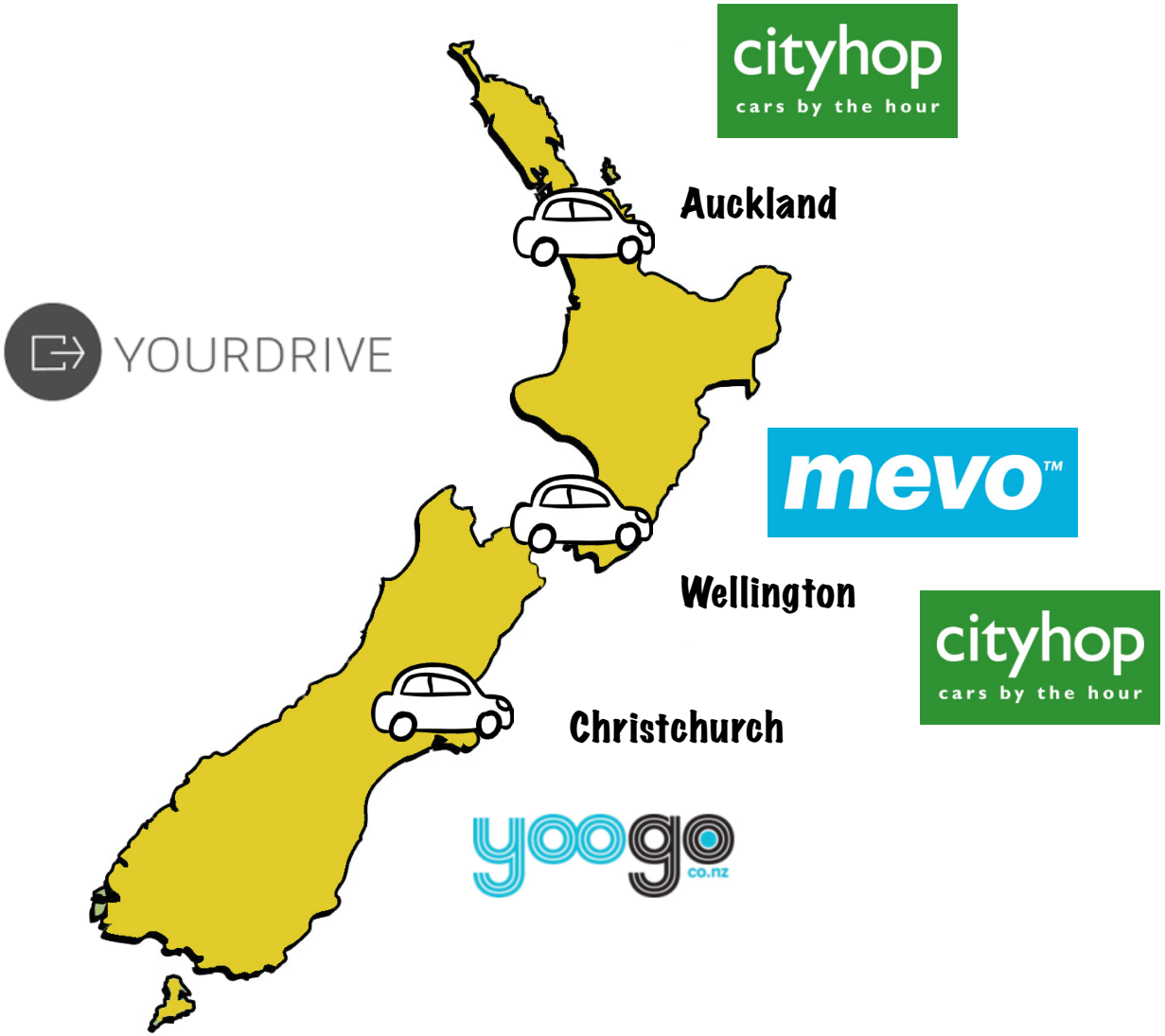
- Melbourne announced as the host city, 6-9 June 2021
- Biggest public transport summit bringing together global leaders
- Our success based on strong investment, collaborative opportunities, unique private and public partnerships
- 3,000 delegates & 15,000 visitors
- Opportunity to exhibit, host technical tours, presentations and sponsorship

uitpsummit.org

New Zealand

since 2007

car sharing
car share



New Zealand

Auckland Transport approves new car share policy

29/11/2019 12:15 p.m.

Car Share Policy 2016

Latin America

42 countries (with Caribe)
population: ~642 million inhab

(World Bank, 2018)

car-oriented
CAR DEPENDENT
cultural barriers to share
crime and safety issues
ride-hailling is very popular

Latin America

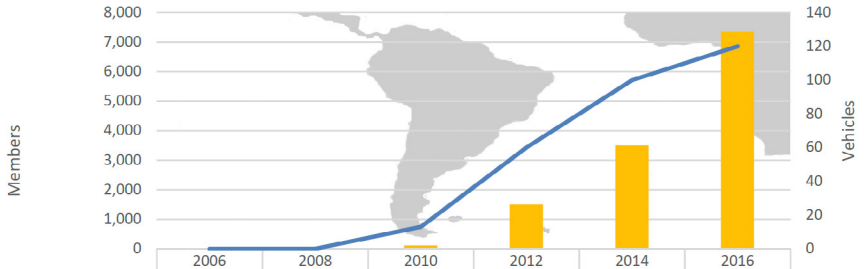
EVs

since 2009

car sharing
auto compartido
coche compartido
carro compartilhado

South America

South American Trends (n=2)



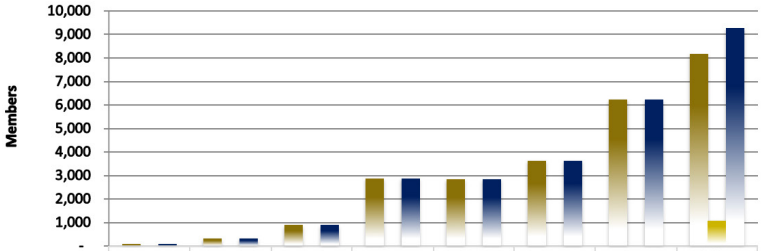
	2006	2008	2010	2012	2014	2016
Members	0	0	110	1,500	3,500	7,350
Compound Annual Member Growth Rate (2 yr)	0%	0%	0%	269%	53%	45%
Vehicles	0	0	13	60	100	120
Compound Annual Fleet Growth Rate (2 yr)	0%	0%	0%	115%	29%	10%
Member-Vehicle Ratio	0.0	0.0	8.5	25.0	35.0	61.3

*** Data depict October of each even numbered year. Numbers do not include P2P carsharing. Proxies from reports and media sources were used for two out of three nations surveyed in North America and one out of two nations in South America. "n" denotes the number of countries in each respective region.**

Source: Shaheen, S., Cohen, A., Jaffee, M., 2018a. Innovative Mobility: Carsharing Outlook - Spring 2018. - p. 3

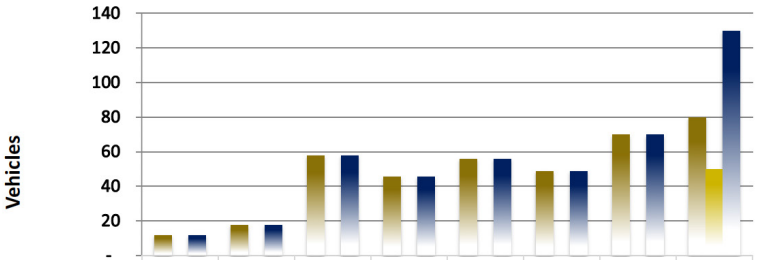
Carsharing Market Trends in South America

Member Growth in South America*



	2010	2011	2012	2013	2014	2015	2016	2017 (Jan)
Brazil (n=2)	98	347	910	2,884	2,857	3,658	6,250	8,200
Chile (n=1)							-	1,100
South America (n=3)	98	347	910	2,884	2,857	3,658	6,250	9,300

Vehicle Growth in South America*



	2010	2011	2012	2013	2014	2015	2016	2017 (Jan)
Brazil (n=2)	12	18	58	46	56	49	70	80
Chile (n=1)								50
South America (n=3)	12	18	58	46	56	49	70	130

*** Data depict July of each year, and "n" reflects number of operators as of January 2017. Numbers include roundtrip and one-way carsharing. Numbers do not include P2P carsharing. Proxies via media were used for one out of three operators.**

Source: Shaheen, S., Cohen, A., Jaffee, M., 2018b. Innovative Mobility: Carsharing Outlook - Winter 2018. - p. 5

Curitiba

2019 - 2020

EVs

GAZETA DO POVO
Domingo, 22 de Setembro de 2019

› Curitiba

Car sharing

Prefeitura estuda vagas de estacionamento exclusivas para carros compartilhados

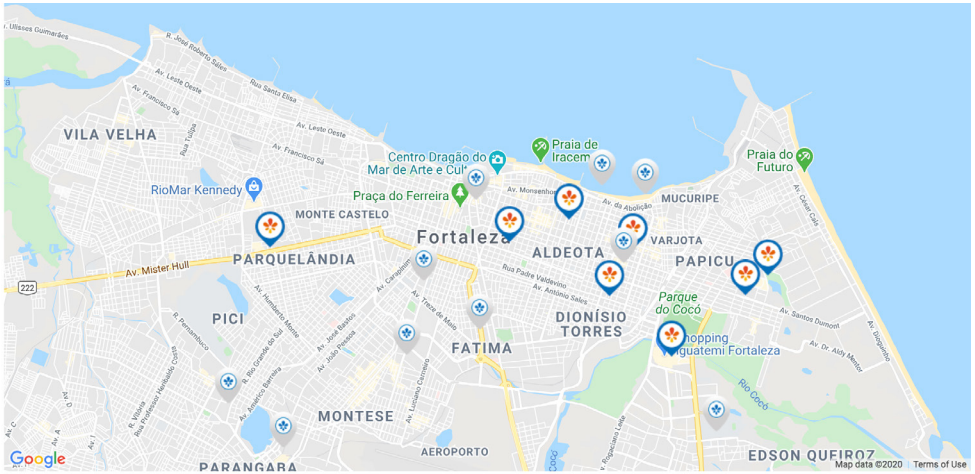
Angieli Maros [07/08/2019] [21:06]

Instituto RENAULT

Fortaleza

EVs

2016



1st barrier...

mobility actions

EUROPEAN**MOBILITY**WEEK
16-22 SEPTEMBER 2019

About | Useful Resources | Participants | Mobility Actions | M

Registered actions

<< Back to all countries list

MOBILITYACTIONS in Australia 2019 (total number: 2)

Luisiana Paganelli (urban planner and research) — 23 September 2019
Hola Car Sharing! Live without a car... Viva sem carro...

GoGet
GoGet Community Recycling Campaign

RMIT UNIVERSITY | Centre for Urban Research — CITY OF PORT PHILLIP — goget.com.au

Hola Car Sharing! Live without a car... Viva sem carro...

23 September 2019

4Diverse. 118A Carlisle St. St Kilda 3182
Australia

"Hola Car Sharing!" was a workshop that aimed to raise awareness of car sharing as an alternative to private car ownership and a way to celebrate the car-free day in the City of Port Phillip, Australia. The action was part of the Latin Festival "Hola Melbourne", and was developed by RMIT University researchers, in partnership with festival organizers, local authorities and a car sharing provider.

https://www.holamelbournefest.com/program-2/#mon_23
https://www.facebook.com/events/433124857299269/
https://www.eventbrite.com.au/e/hola-car-sharing-tickets-71031590399

Organiser

Luisiana Paganelli (urban planner and researcher)

carsharing@luisiana.com.br
Email to Luisiana Paganelli (urban planner and researcher)

opportunity for cities...

CARSHARING CITY AWARDS 2020

Jan 30, 2020

The Carsharing Association (CSA) in collaboration with movmi is organizing the 2020 Carsharing City Awards. The Carsharing City Awards is a unique celebration of the cities and their people who are leading the way in introducing, maintaining, supporting and recognizing the value of having a sustainable carsharing eco-system within their city.

Carsharing City of the Year – Metropolitan: Awarded to the metropolitan city (over 1 million residents or in a metropolitan location) showcasing the best use and implementation of unique policies, technology and processes to enhance the overall operability and viability of carsharing services.

Carsharing City of the Year – Regional: Awarded to the regional city (under 1 million residents or in a regional location) showcasing the best use and implementation of unique policies, technology and processes to enhance the overall operability and viability of carsharing services.

https://www.surveymonkey.com/r/K9RGPMW

conclusion

initial classification scheme

- first step toward a more detailed and comprehensive framework
- with potential to be improved
- content is under development and is not exhaustive
- will be updated and improved with results from my Ph.D. research

framework developed for this research

- may **inform and provide insights** to policy makers, transport planners and operators on the elements that should be considered while formulating strategies or initiatives to integrate and manage car sharing in their cities.

in general

- a more comprehensive and strategic approach to car sharing may lead to the **creation of effective governance** systems for it.
- this research brings an opportunity to **reflect on a significant current topic** that is relatively unexplored in transport discourse and to include the car positively in policies for urban transport.
- the structure developed for this research could be **adapted to other shared mobility services**, perhaps impacting positively on how they are incorporated into urban systems.

thank you!

Luisiana Paganelli
Architect | Urban planner - PhD Candidate
carsharing@luisiana.com.br | luisiana.paganellisilva@rmit.edu.au

RMIT UNIVERSITY | Centre for Urban Research