



DUBAI WORLD CONGRESS
FOR SELF-DRIVING TRANSPORT

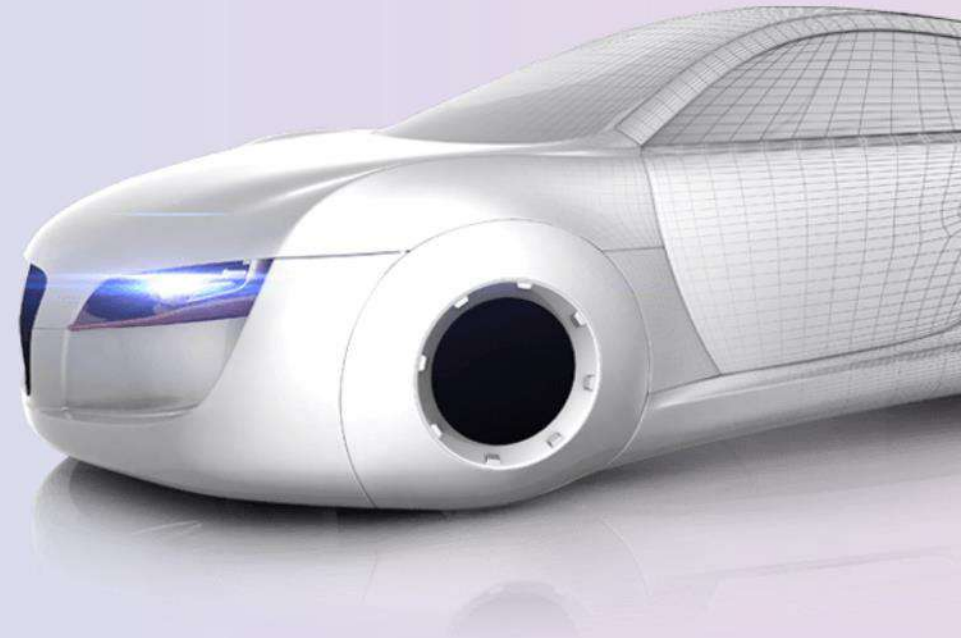
OCT | 2019

On-demand Shuttles: driver and driverless models

Adrià Ramirez Papell

Chief Mobility Officer, **SHOTL**

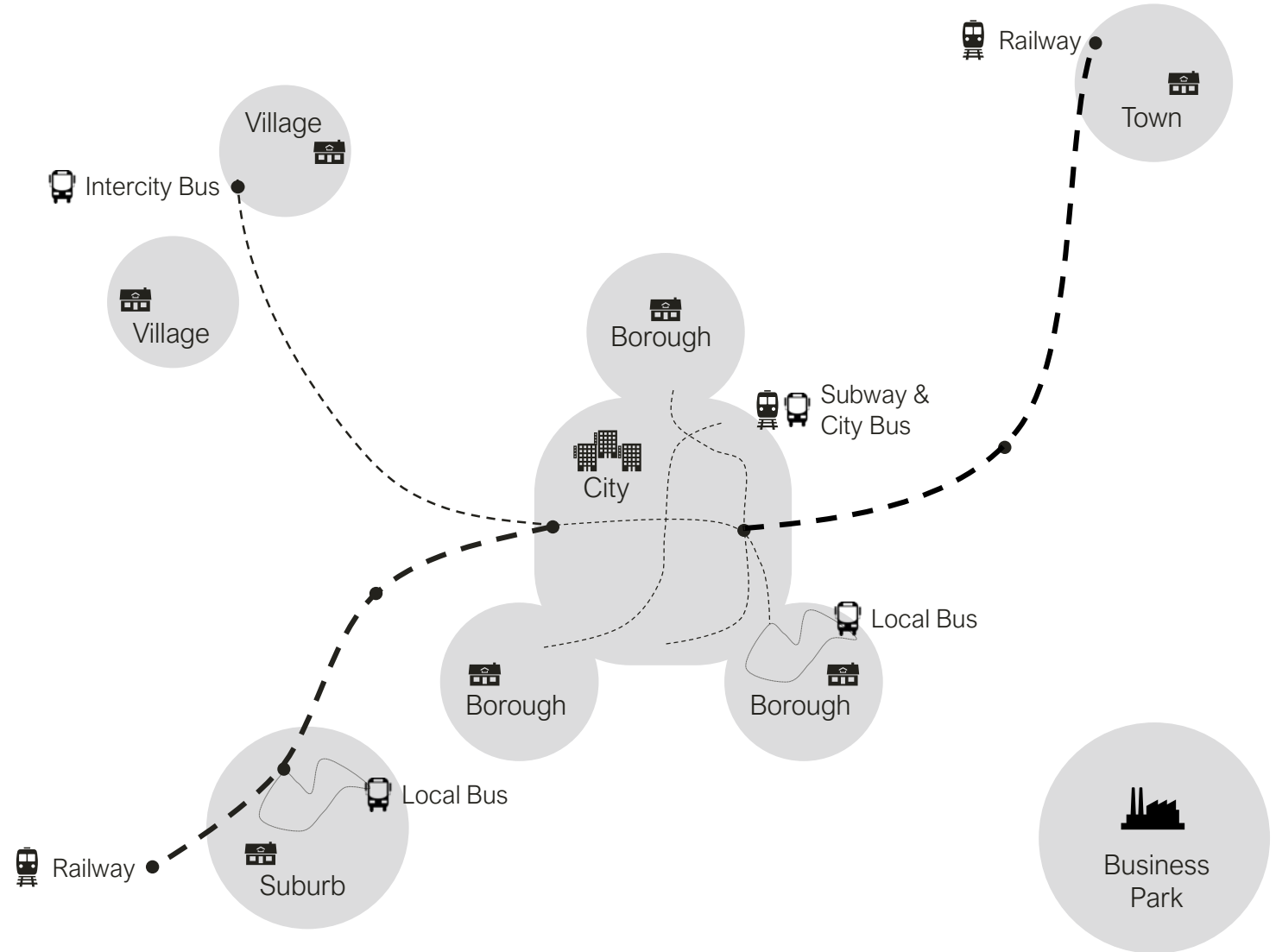
www.sdcongress.com



PROBLEM

Efficiency of transport solutions

Classic transport options are powerful, but not suitable for all needs



PROBLEM

Accessibility

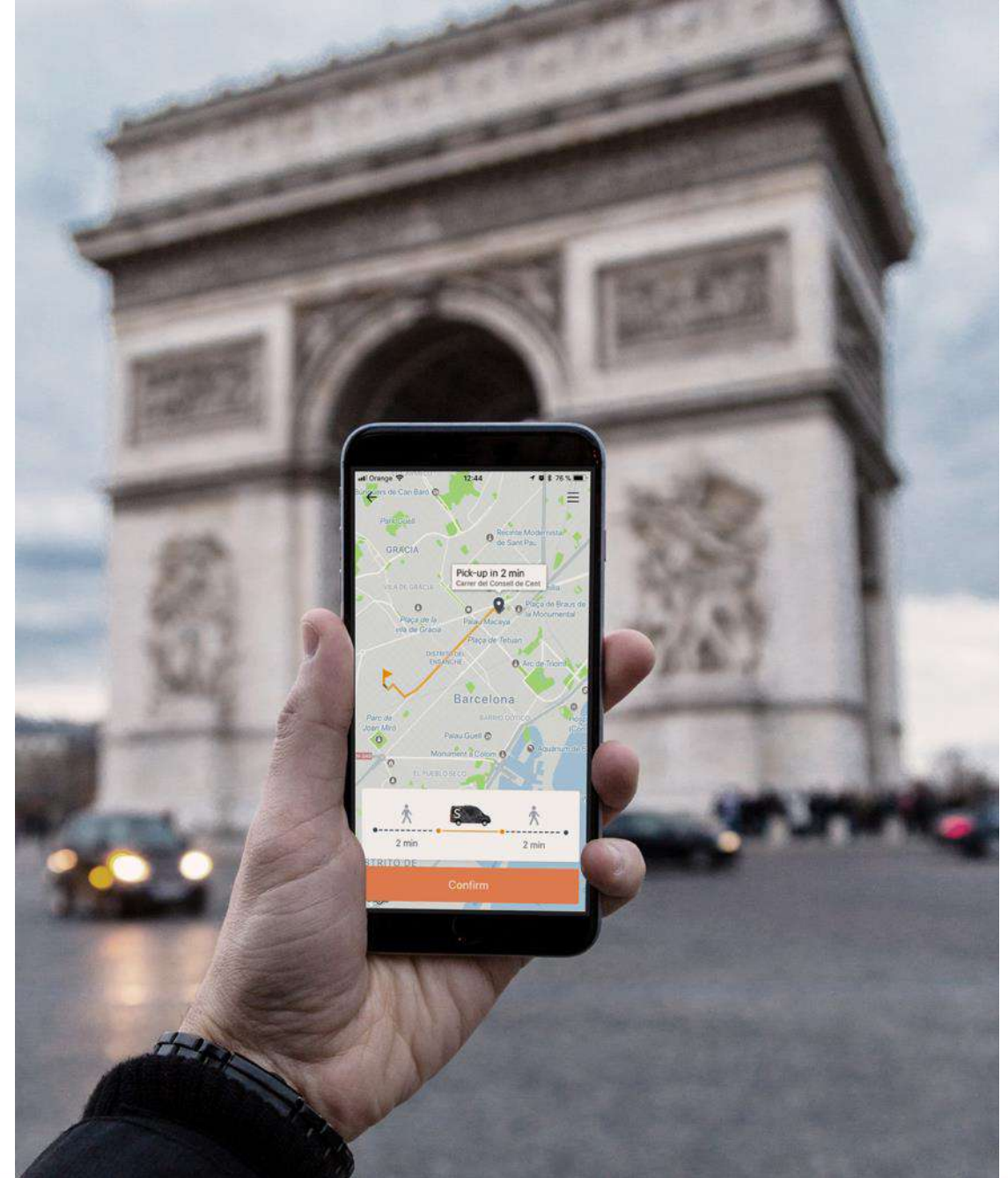
Population excluded from
vehicle ownership



DISRUPTION

Digitalisation

New transport services



DISRUPTION

Digitalisation



Bike sharing
Electric scooters



Motosharing



Carsharing



Carpooling



On-demand bus
(dynamic)



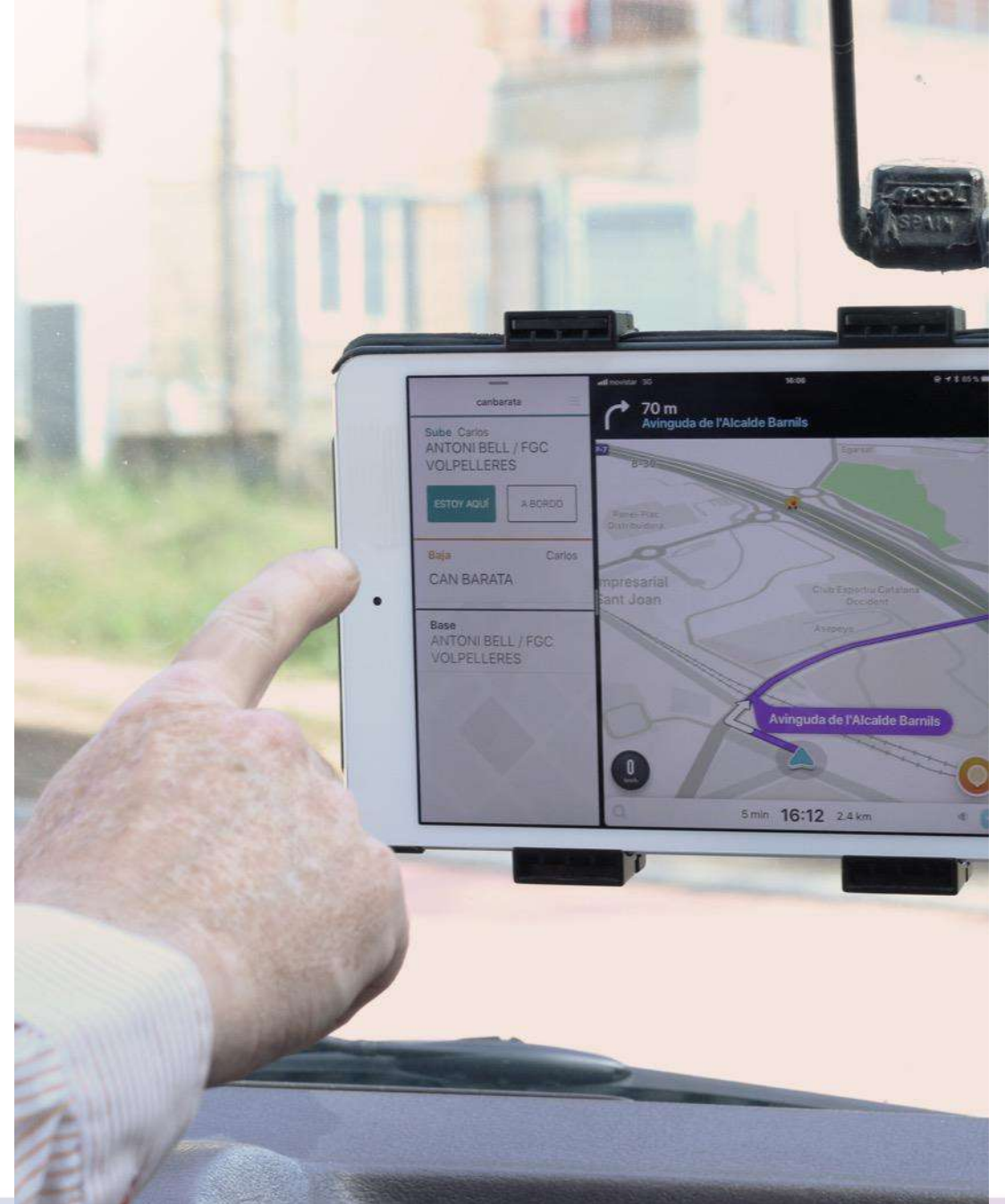
eHailing

DISRUPTION

On-demand bus

No schedules, no pre-defined routes,
only a cloud of virtual stops.

Users can request a trip from any stop
to any other.



PRODUCT

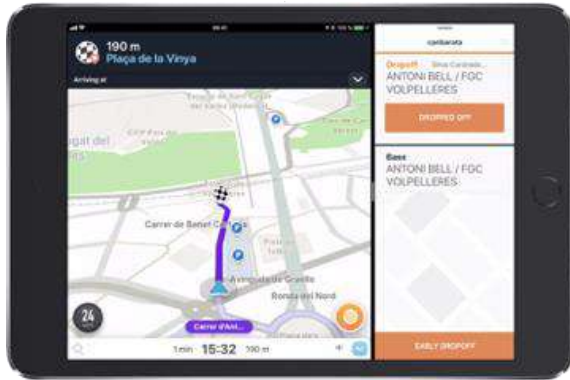
The Platform

3 Management Module

1 Passenger App



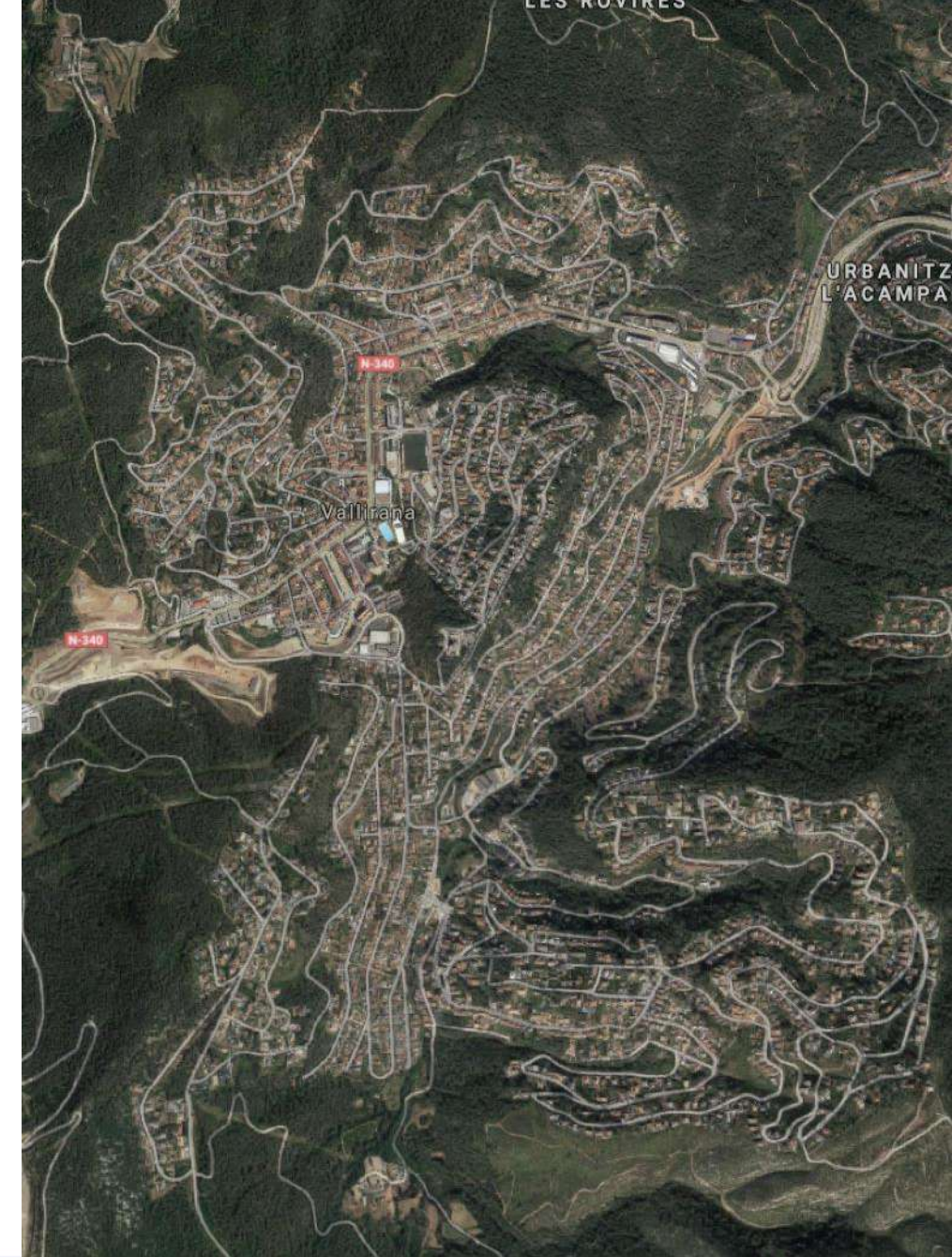
2 Driver App

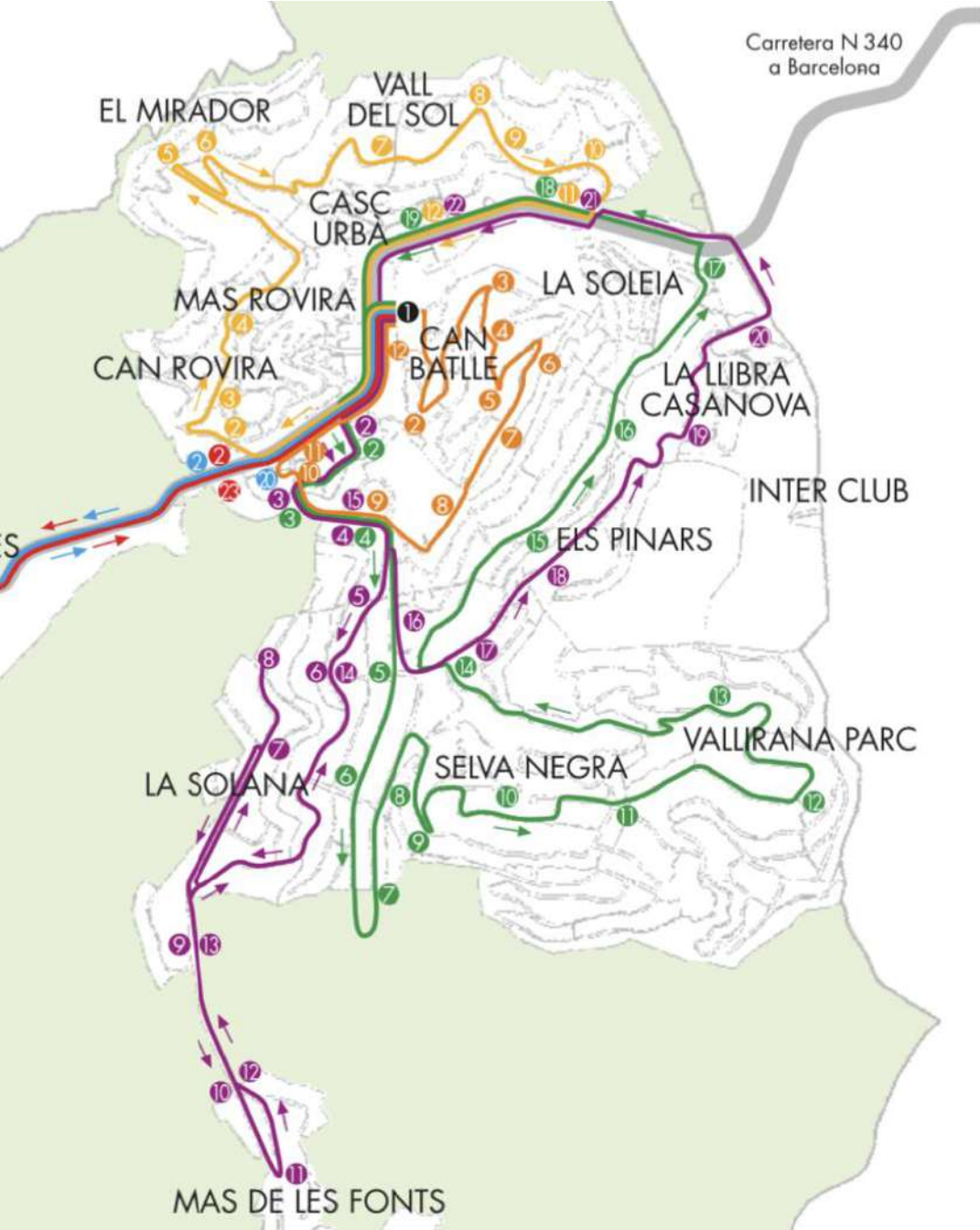


CASE STUDY

Suburb

- 7,500 inhabitants
- 4.9 km²
- 150 km of streets
- 1 minibus available





BASIC SOLUTION

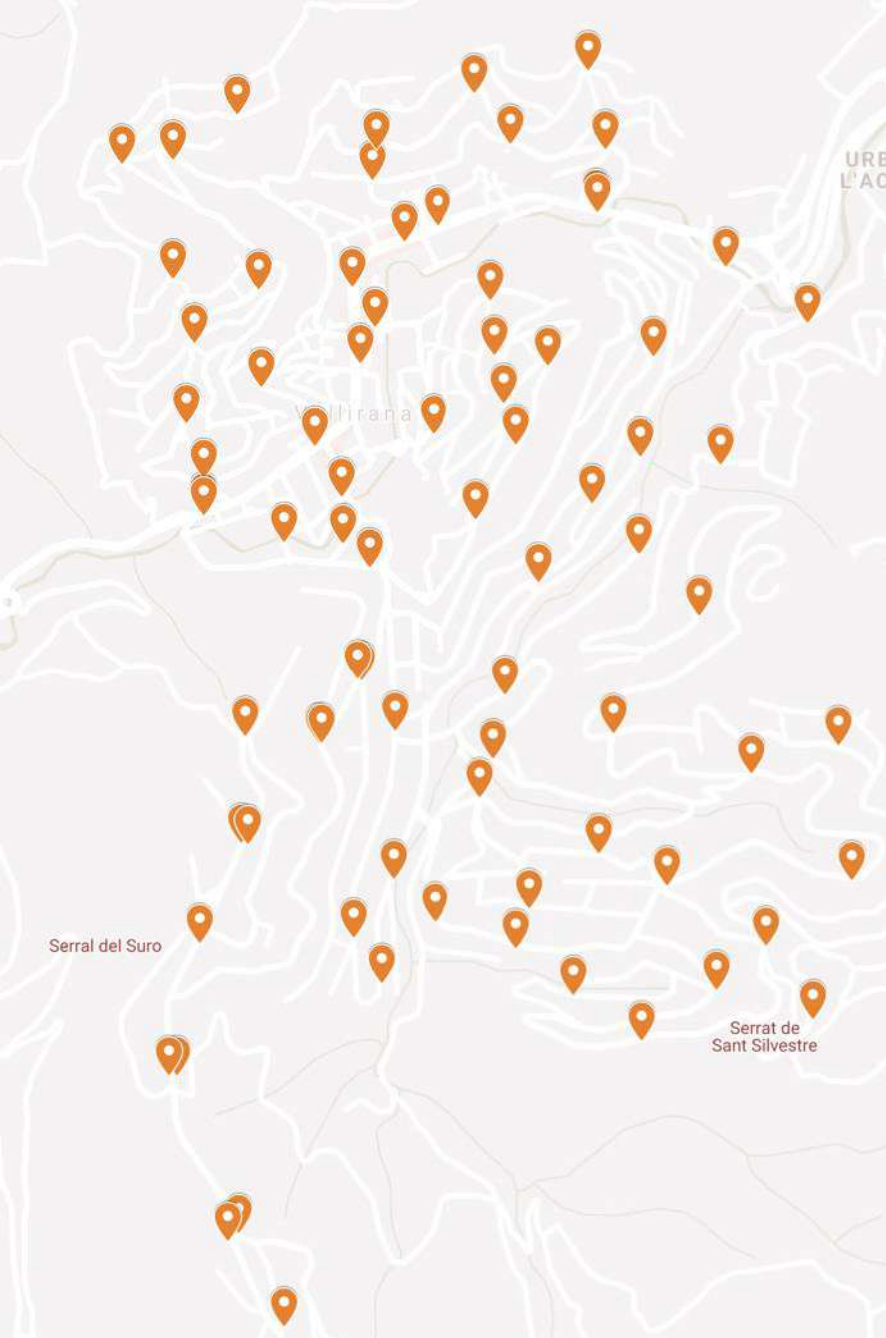
Classic bus line

L2 SELVA NEGRA				
Av. Parellada	Selva Negra	Vallirana Parc	Els Pinars	Av. Parellada
7.50	8.00	8.03	8.10	8.20
9.05	9.15	9.18	9.25	9.35
10.50	11.00	11.03	11.10	11.20
12.25	12.35	12.38	12.45	12.55
13.40	13.50	13.53	14.00	14.10
18.25	18.35	18.38	18.45	18.55

L4 MAS DE LES FONTS			
Av. Parellada	Mas les Fonts	La Llibra Casanova	Av. Parellada
8.25	8.37	8.45	9.00
9.40	9.52	10.00	10.15
11.30	11.42	11.47	12.05
13.00	13.12	13.17	13.35

L5 MIRADOR-VALL DEL SOL		
Av. Parellada	Vall del Sol	Av. Parellada
12.05	12.15	12.20

L6 CAN BATLLE		
Av. Parellada	Can Battle	Av. Parellada
10.20	10.27	10.35



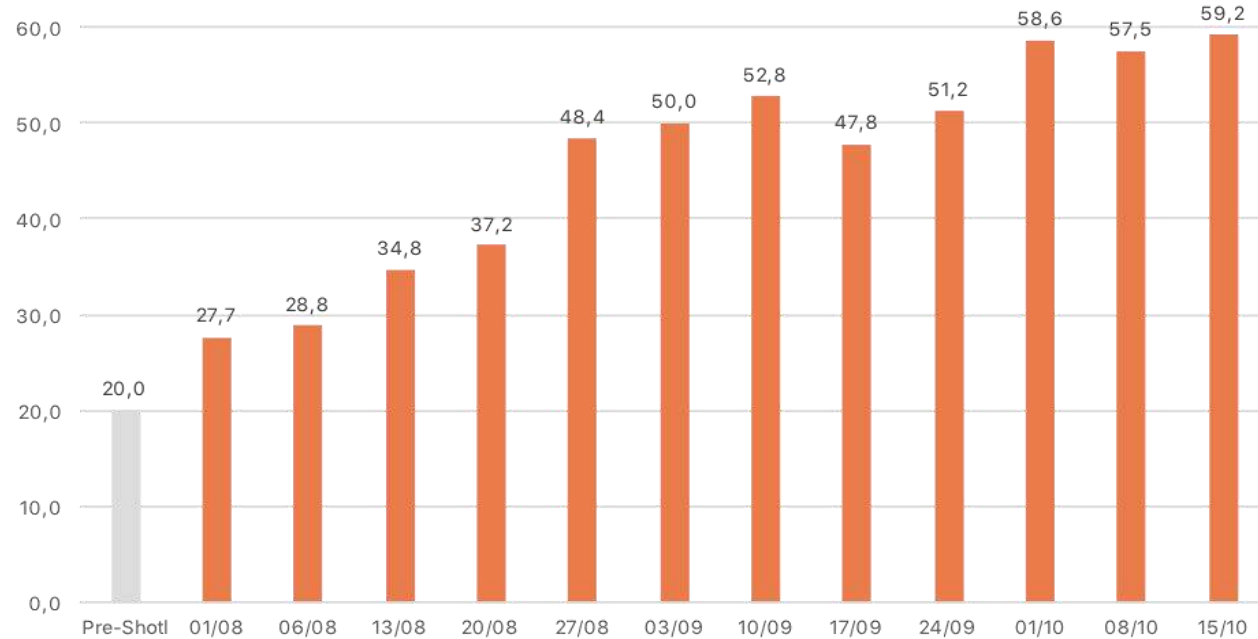
SHOTL'S SOLUTION

Fully flexible bus

- Route is planned in real time as per users' requests via App or hotline
- Larger operational area
- Shorter waiting & traveling times.

SHOTL'S SOLUTION

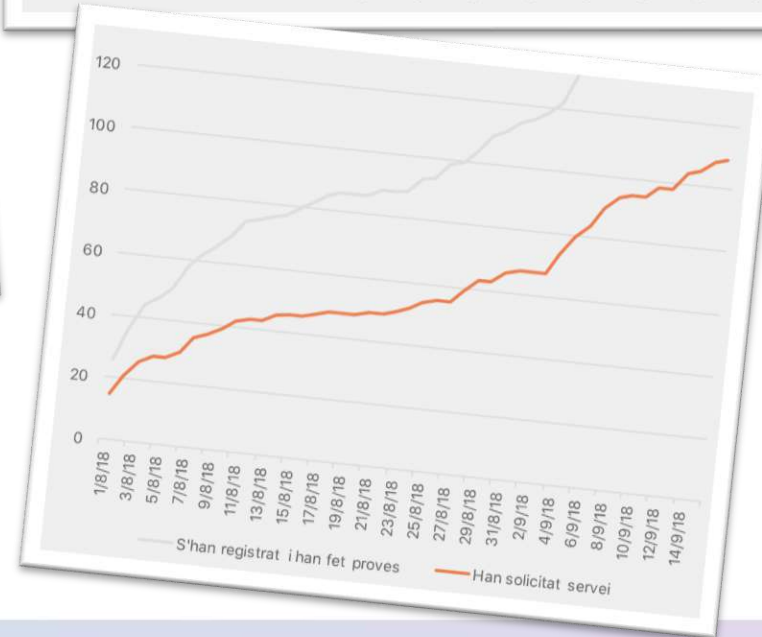
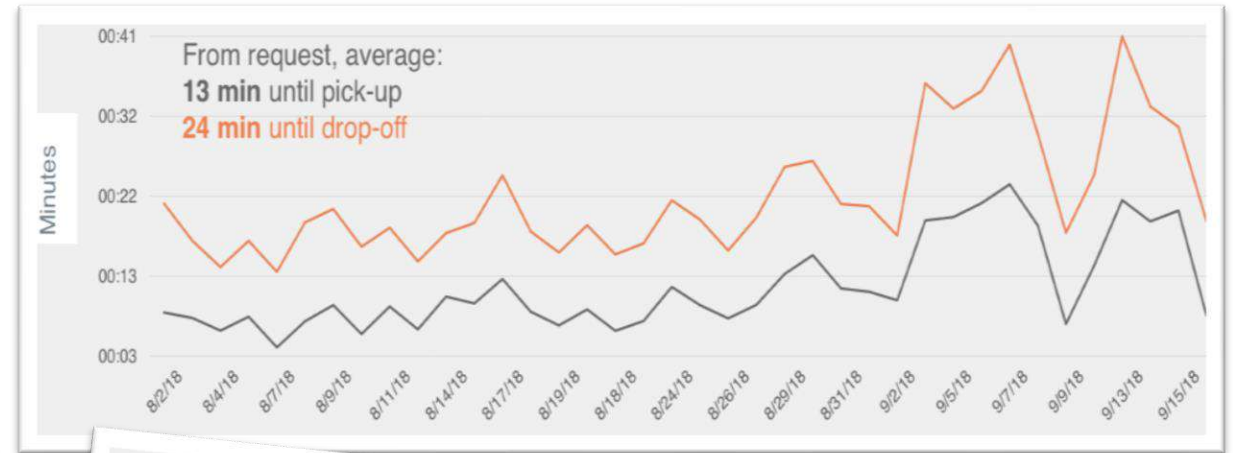
Results



	Classic	DRT
Waiting time	75 min	13 min
Passenger demand (day)	20	60
Kms/day	130	160

SHOTL'S SOLUTION

Results



ALSO IN

Corporations

- Munich Airport, Germany
- Major OEM

Several buildings at 2-4 Km distance, Shotl provides a solution for business trips between them





ALSO IN

Digitalising existing services

- Paratransit service, Lisboa
- School bus, Essex, UK
- Night bus, Pavia, Italy

BUSINESS MODEL

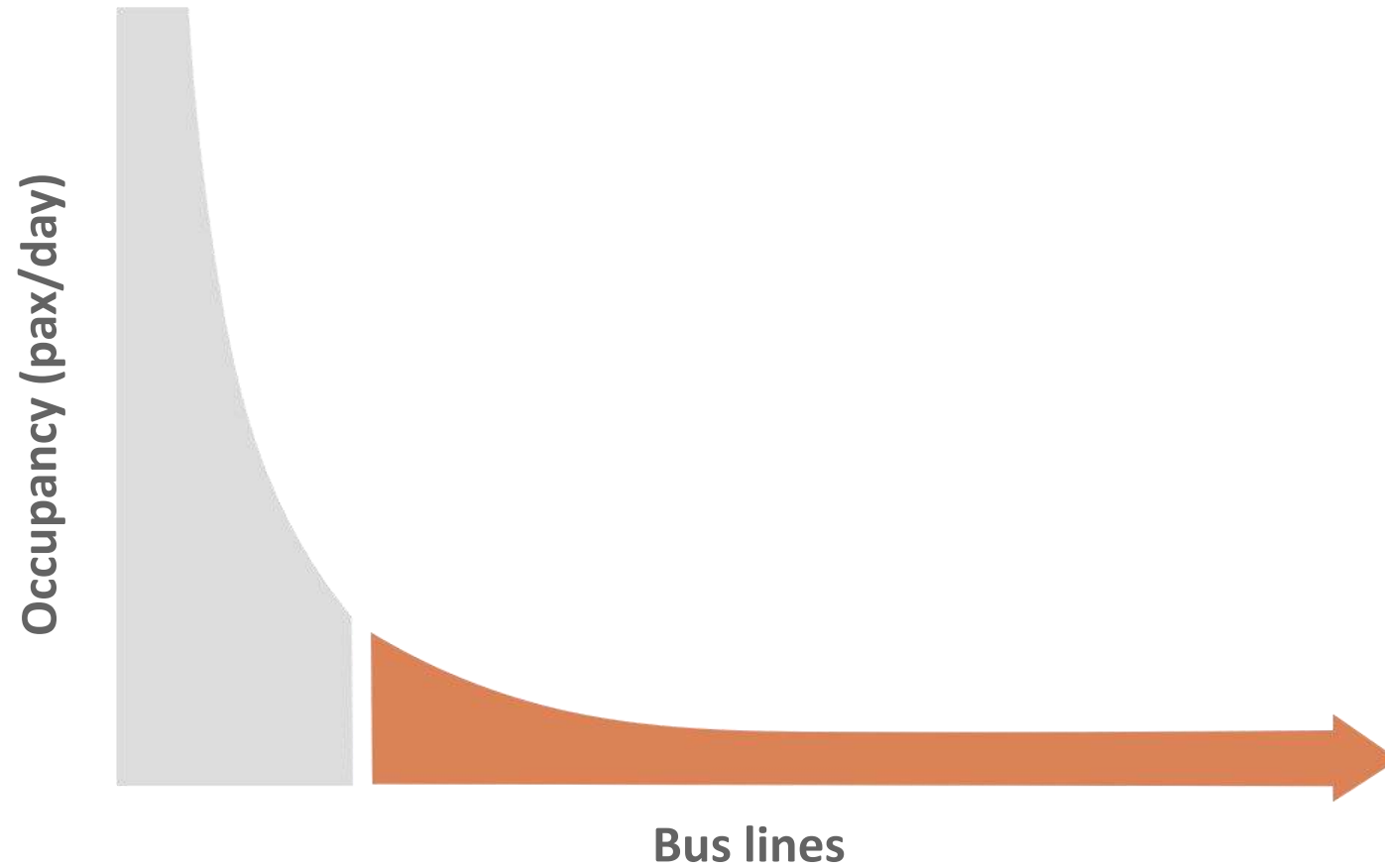
B2B

- **Mobility Platform**
- **SaaS**
- **Corporations, municipalities, transport providers**



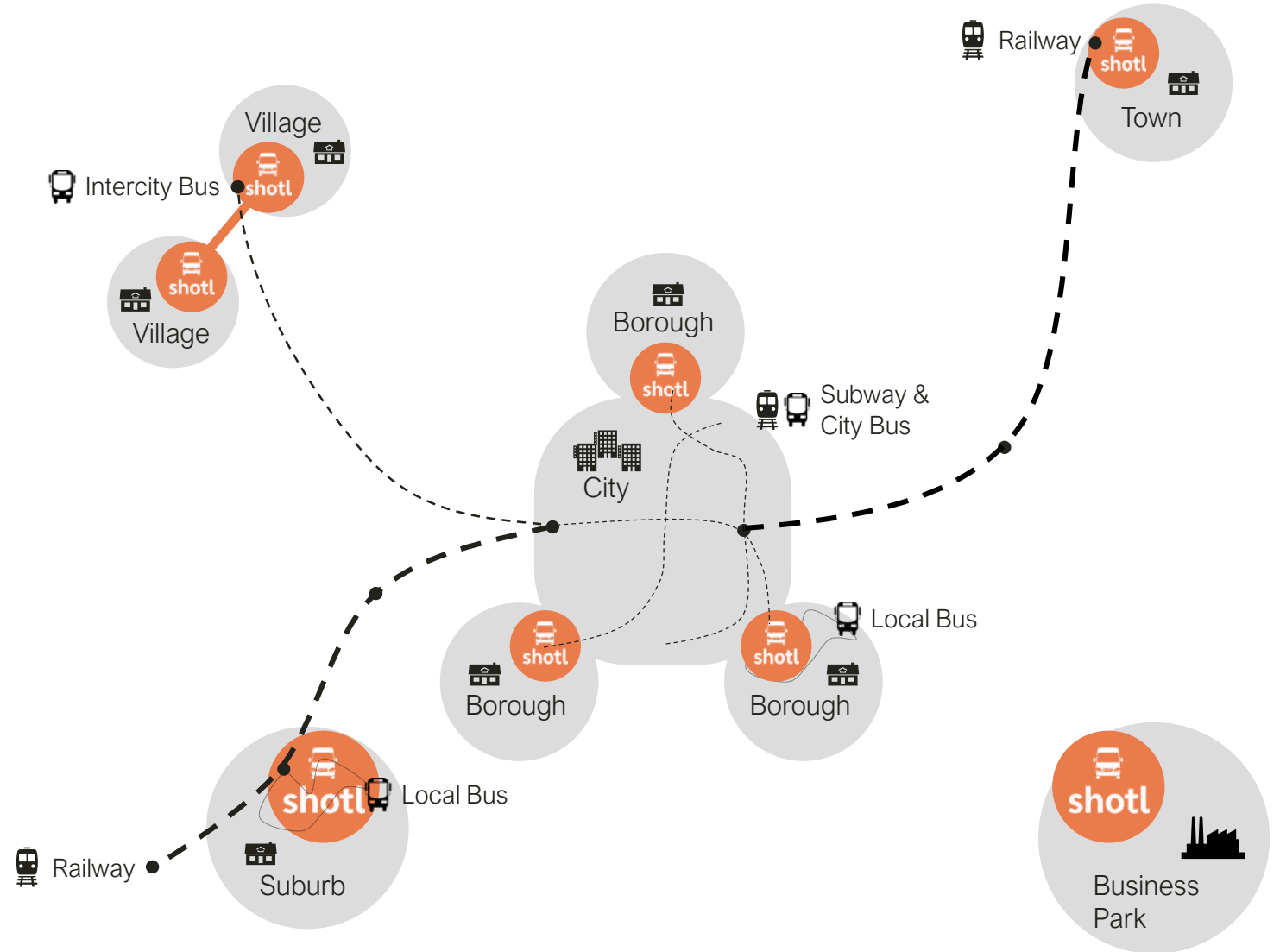
MARKET

Target audience



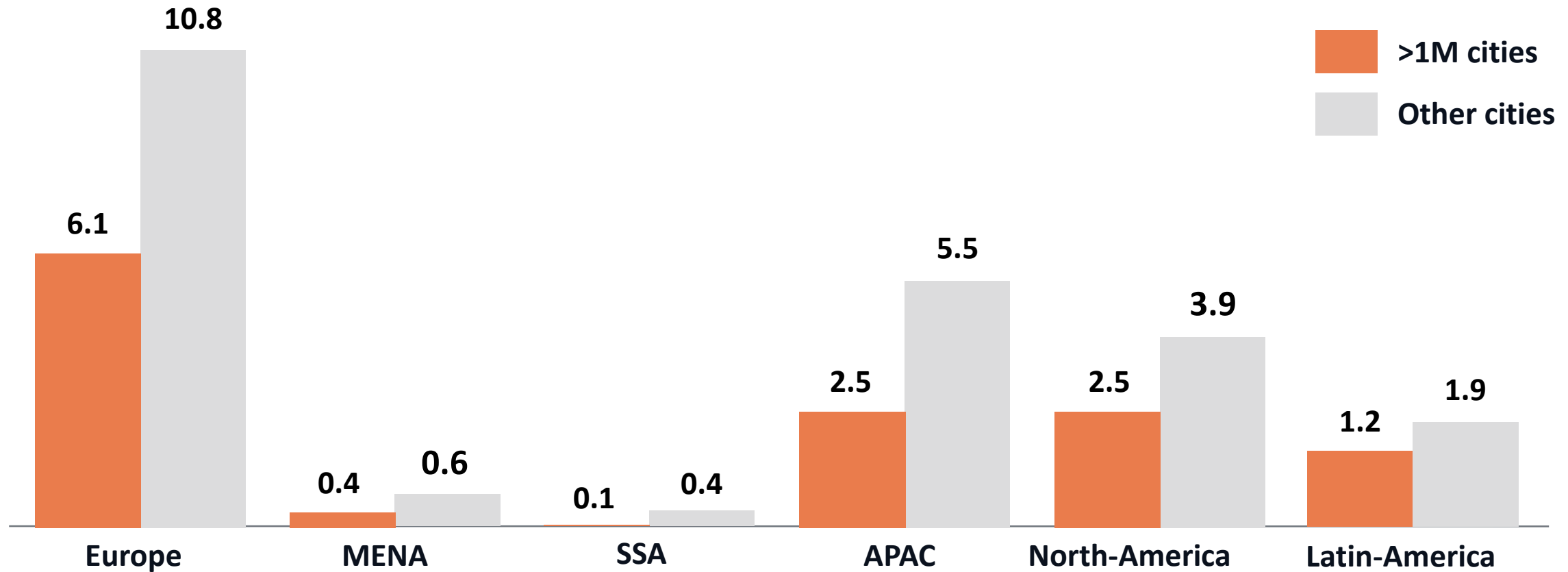
MARKET

Target audience



MARKET

Target audience



On-demand public transport software revenue, in billion \$

Source: BCG analysis for Shotl

MARKET

Limitations

- 1 hour of service: 40-60\$
- 5 to 18 trips per hour-vehicle
- 3 to 8\$ per trip



MARKET

Limitations

“best part of the pie”

15/10/2019 Uber and Lyft finally admit they're making traffic congestion worse in cities - The Verge

THE VERGE

POLICY TRANSPORTATION UBER

Uber and Lyft finally admit they're making traffic congestion worse in cities

Ride-hailing accounts for up to 14 percent of vehicle miles traveled in some cities, according to a study commissioned by Uber and Lyft

By Andrew J. Hawkins | @andjrhawk | Aug 6, 2019, 1:33pm EDT




Photo by Smith Collection/Gado/Getty Images

Uber and Lyft have long argued that ride-hailing apps have the potential to make cities better by easing traffic and reducing personal car ownership. And every time a study emerges that counters that narrative by exposing ride-hailing's worsening effects on congestion, the two companies respond by casting doubt on the studies' findings.

Well, this time the data is coming from inside the house. Uber and Lyft tapped transportation consultancy Fehr & Peers to examine their combined vehicle miles traveled (VMT) in six cities in September 2018, and compare that number to the total VMT in each area for the same month. [The results](#) show that while they are vastly outstripped by personal and commercial vehicles, Uber and Lyft are still responsible for significant shares of VMT in those cities.

<https://www.theverge.com/2019/8/6/20756945/uber-lyft-inc-traffic-congestion-study-fehr-peers>

OUR SITES

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Study: Uber and Lyft Caused U.S. Transit Decline

By Angie Schmitt | Jan 22, 2019

Photo: Khol Vinh

Uber and Lyft are still crushing transit across the U.S., according to new study examining the effects in 22 cities.

Uber and Lyft enter a city, the app-based taxis decrease rail ridership by 1.29 percent per decrease bus ridership by 1.7 percent, the study by three University of Kentucky found [\[PDF\]](#).

The decline is cumulative. Authors Michael Graehler, Richard Mucci and Gregory Erhardt and Lyft for example, have reduced bus ridership in San Francisco a percent since they entered the market in 2010.

to make such findings, but it is one of the broadest, helping to explain declined in almost every U.S. city over recent years. These declines service reductions or by maintenance issues — although those have and New York City.

the trend, but it would not be enough to make up for the decline. Analysts estimated that San Francisco would have to increase bus service by 10 percent last year, despite major investments in the L.A. Metro are grappling with unexplained ridership declines in major cities — save Seattle — and they track the decline in San Francisco City, Graehler points out, daily Uber and Lyft are concentrated in city centers, which told Streetsblog. “What appears to

DISRUPTION

Driverless

- Connected
- Electric
- Shared



DISRUPTION

Driverless vehicles

P

No parking need

MaaS

From ownership to “as a Service”

\$

On-demand service at half the cost

VISION

Shotl on the mobility landscape

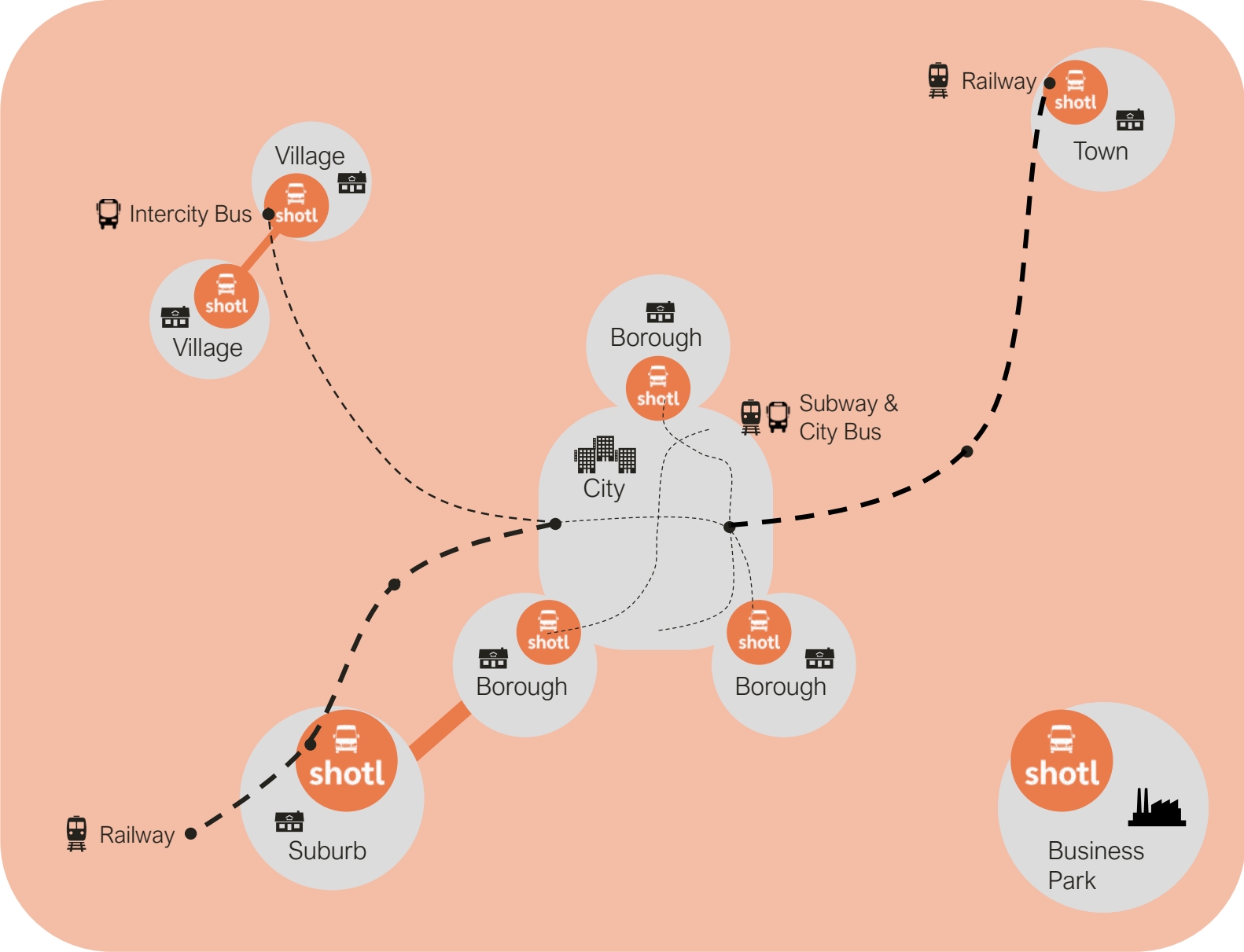


sensible⁴

Image sources: Shotl, S4 and TravelSpirit.io

VISION

Scaling-up



VISION

The actual city



VISION

The Shotl city



VISION

The Shotl city

Challenges

- Curb regulation & digitalisation
- Open, standard integration





Gold Award



shotl

On-demand Buses

Adrià Ramirez-Papell

adria@shotl.com

@adriaShotl

+34 722 755 145