



How on-demand transit partnerships are transforming mobility for cities and transit agencies

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Today

- Context
- What is on-demand transit?
- The evolution of on-demand
- About Via
- On-demand transit's use cases
- What does the future hold?

The Current Context



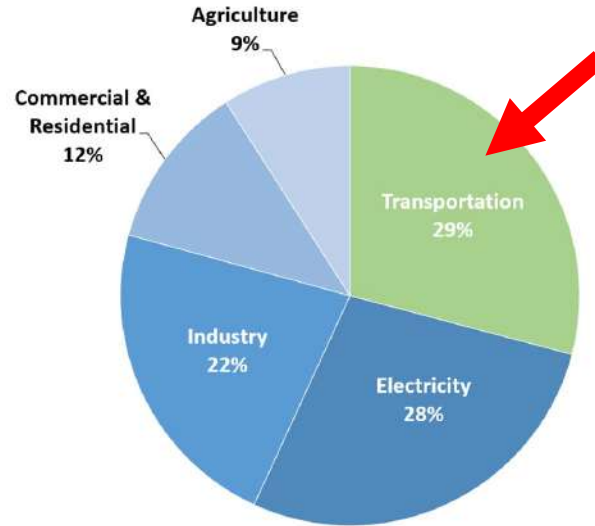
We face a major transportation challenge



Congestion/ overloaded infrastructure



GHG emissions



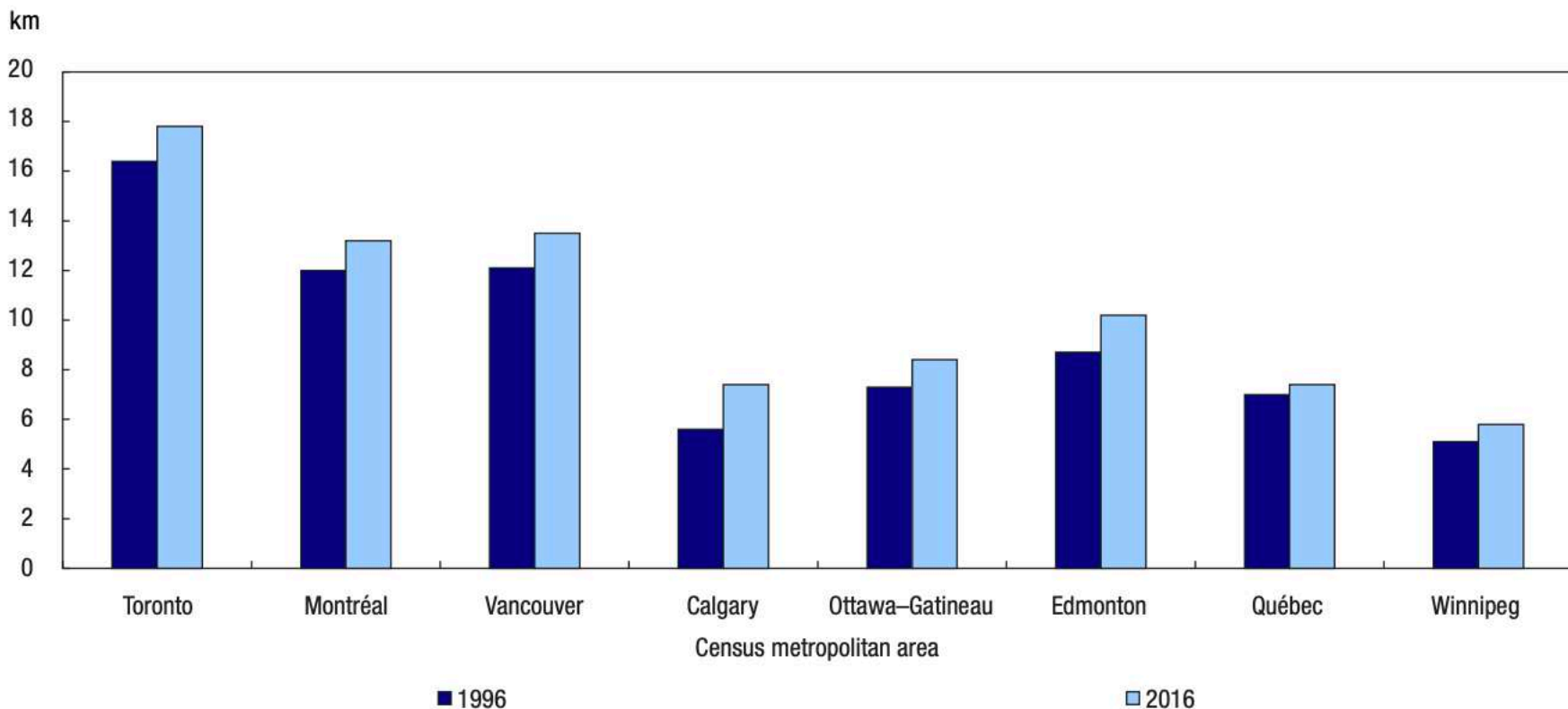
Economic + Social Mobility

In U.S. metropolitan areas, only **25%** of low- and middle-skill jobs are accessible by public transit **within 90 mins**

(Brookings)

Chart 1

Average distance from place of work to city centre,¹ largest CMAs, 1996 and 2016

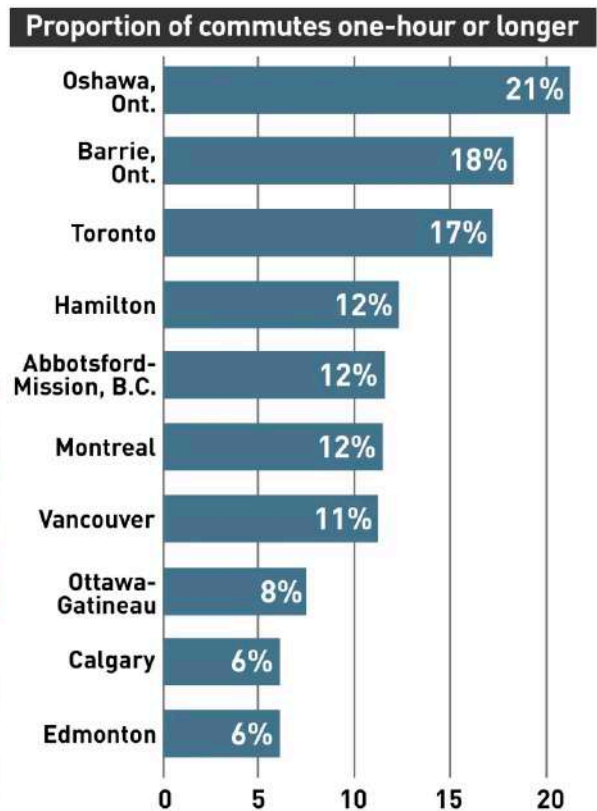


StatsCan study shows Canadian commute times are getting longer – and it's costing us



U of T professor says there's an economic value in actual travel time

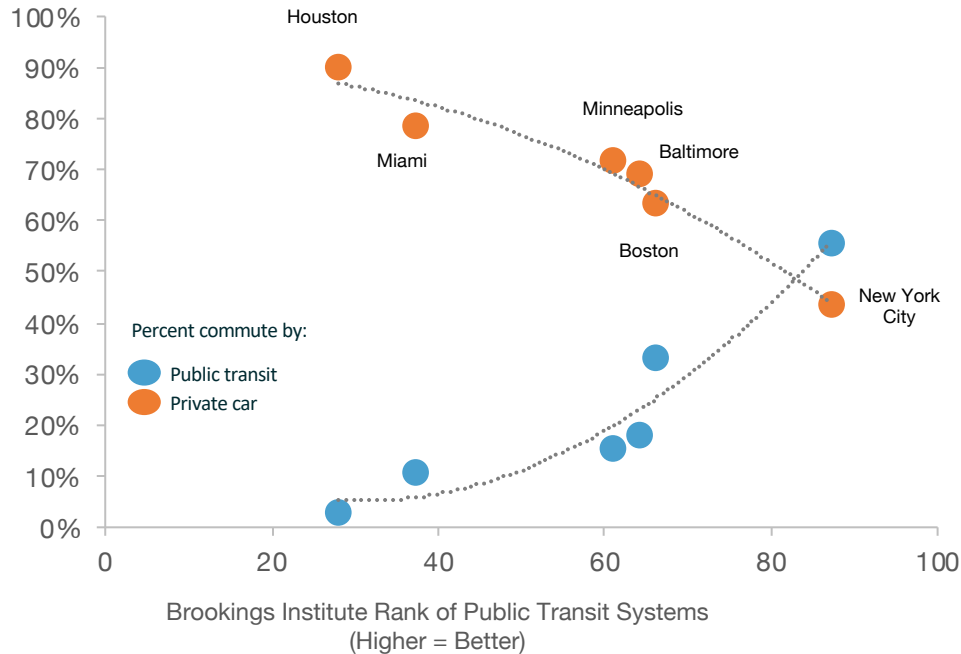
[Melissa Bennardo](#) · CBC News · Posted: Mar 05, 2019 4:00 AM ET | Last Updated: March 5



The private car vs. public transportation



Public transit can replace the private car, but existing solutions are inefficient or too costly



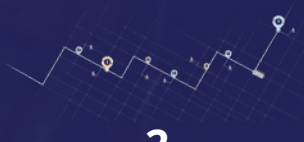
What is on-demand transit?

HOW THE SERVICE WORKS



1

Request ride



2

Via assigns
optimal seat



3

Walk to
Virtual
Bus Stop



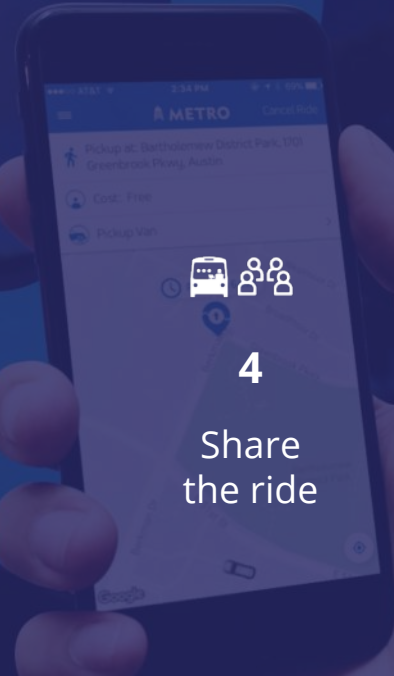
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Share
the ride



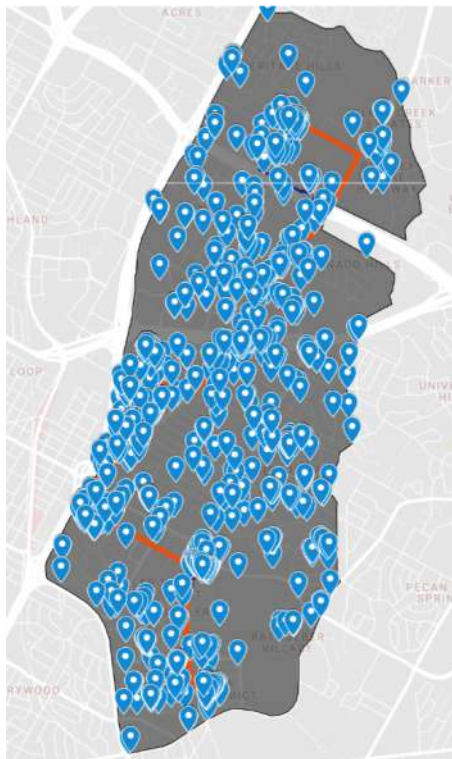
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Route
dynamically



Philosophy of Service Design:

Fixed Route vs. On-Demand



Freedom from fixed routes and schedules



The evolution of on-demand





TELE BUS

4150

GM

Regina



↓ Platforms ↓

Information
Emergency
HELP

About Via



Our Mission

To build the world's most efficient, convenient and accessible mobility solutions



Via's Global Presence: Via, ViaVan, and Partner services

90+
Deployments

21+
Countries

2-3m+
Rides/month

250+
Engineers



TWO PARTNERSHIP MODELS

A smartphone displaying a ride-sharing app interface. The screen shows the app name 'YOUR BRAND' with 'Powered by VIO' underneath. It indicates 'Passengers: Just me' and a pickup location 'Saint Michael's Road, Setonau...'. A map is visible at the bottom with a 'Set Pickup' button.

**SOFTWARE
AS A SERVICE
(SAAS)**

A smartphone displaying a ride-sharing app interface for 'VIO'. It shows a pickup location 'NW corner, Washington Ave & Park Ave, on Park Ave at Fresh Fabric, Inc.', a cost of '\$3.95', and a pickup time of '6 minutes'. A 'VIO' logo is visible on the side of a van in the background.

**TRANSPORTATION
AS A SERVICE
(TAAS)**

What are the use cases for on-demand transit?



Diverse Use Cases



Urban



Transit Deserts



First / Last-mile



Route Optimization



Corporate transit



Paratransit / Dial-a-Ride / NEMT



School Transportation



University shuttles

Urban



Case Study: BerlKönig

Strengthening public transport

Confidential & Trade Secret

Problem

Public transport share in Berlin
(stagnant since 1998) ¹ **27%**

High pollution due to
motorized private transport
NO₂ levels up to **77µg/m³**

Public transport offering partly insufficient in
some areas and during off-peak times

Many residents not
interested in public
transit

BVG: Berlin

- An end-to-end flexible transportation service, **Via provides vehicle, software, data sharing and administration, BVG provides drivers**
- Launched in **September 2018**
- Complementing public transit with **100+ vehicles, mostly electric** including wheelchair-accessible Mercedes-Benz vehicles (V-Class)
- **Integration with** BVG Journey Planner

1M

rides since
launch (sep 18)

97%

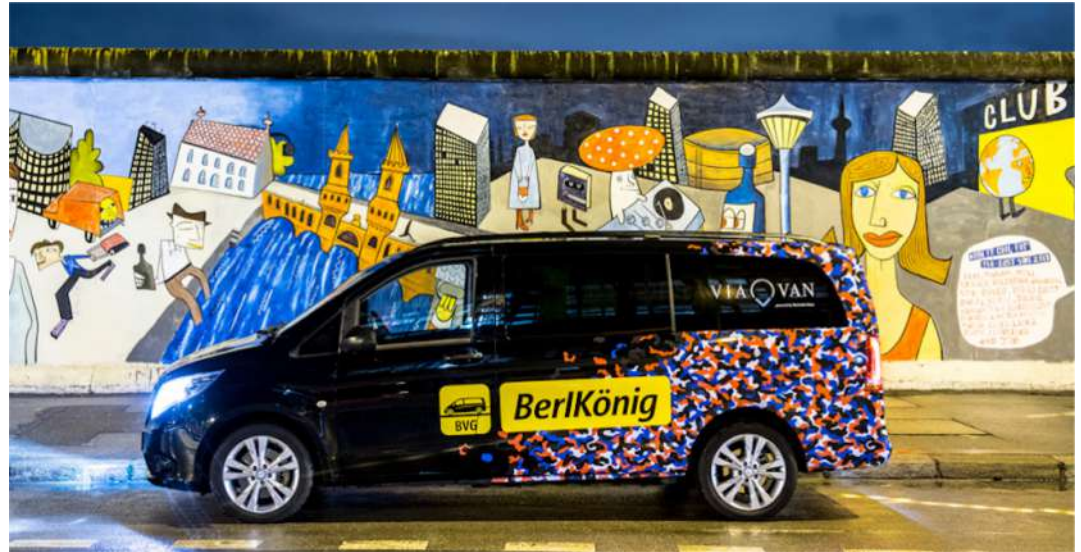
customer satisfaction

100,000

app-downloads

5,000

virtual bus stops



Currently, >150 vehicles are in use

>50% are fully electric

**Fully electric B-Class
vehicles with 4
passenger seats**



**Fully electric eVito
Tourer with 6
passenger seats**



**Conventional V-Class
vehicles with 6
passenger seats**



Barrier-free service

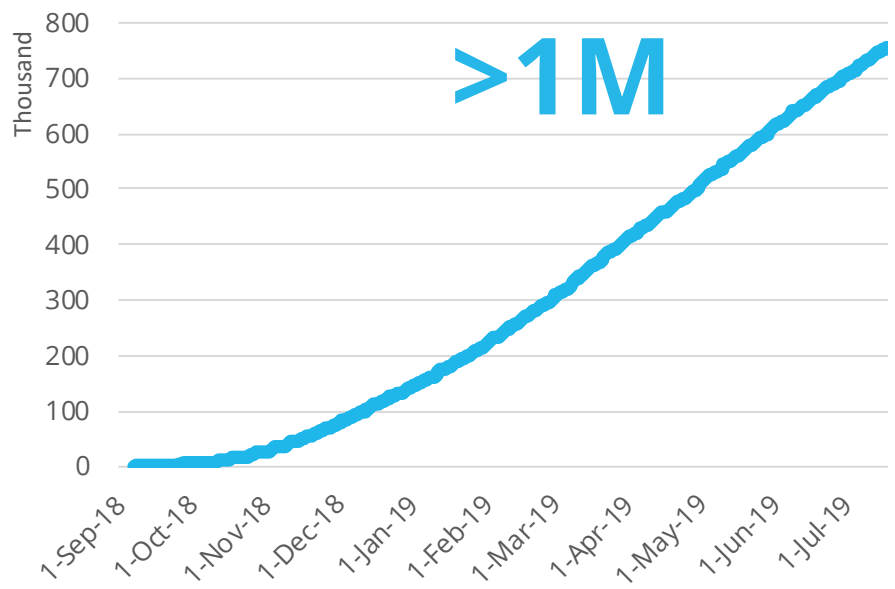
 **Raul Krauthausen** ... · 4 Min. ✓
hat heute den neuen @BVG_BerlKoenig von @BVG_Kampagne und @viavan in Berlin getestet. Barrierefrei. War geil.



Service is well accepted

>1M rides since launch in September 2018

rides (cumulative)



Rides per month
>100K

App-Downloads
>225K



In June 2019, the BerlKönig project won the UITP „Public & Urban Transport Strategy“ Award

24. July 2019

Confidential & Trade Secret

28



Finalists:

PUBLIC AND URBAN TRANSPORT STRATEGY

- LAND TRANSPORT AUTHORITY (LTA) OF SINGAPORE and AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH (A*STAR) (Singapore) for the project "**Quantifying Transit System Resilience using a Complex Network Approach**".
- VIAVAN TECHNOLOGIES B.V. (50/50 JV - VIA TRANSPORTATION, INC., MERCEDES-BENZ VANS MOBILITY GMBH) and BERLINER VERKEHRSBETRIEBE (BVG) – AÖR (Germany) for the project "**BerlKönig**".
- LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY (United States of America) for the project "**Metro Vision 2028 Strategic Plan**".
- MOSTRANSPROEKT (DEPARTMENT OF TRANSPORT AND ROAD INFRASTRUCTURE DEVELOPMENT, GOVERNMENT OF MOSCOW) (Russian Federation) for the project "**New Moscow Transport network – suburban railway meets urban transport system**".



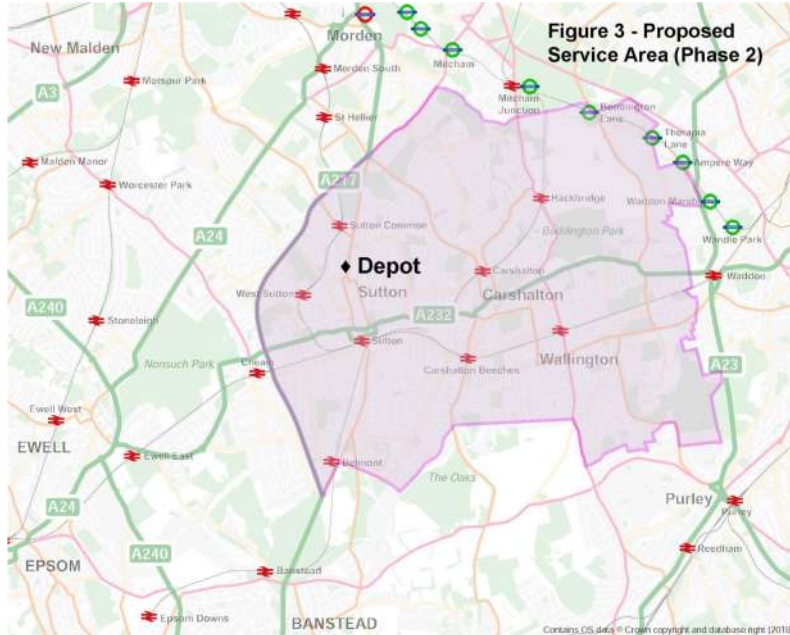
Transit Deserts



Transport for London



Partner: Transport for London
Launch Date: May, 2019



Launched an on-demand high-capacity, accessible van service in borough of Sutton, an **area with high car dependence** and limited public transit

Goals

- Achieve **modal shift** in car-reliant areas
- Understand emerging transport model
- **Complement core TfL network**

First Mile, Last Mile



1201

STERN
BUILDING





Established one of North America's most successful on-demand transit services



250k

PROJECTED ANNUAL RIDERSHIP

18

VEHICLES

4.5

AVERAGE UTILIZATION

Situation:

- No first- and last-mile solution
- Limited access to public transit
- Low density, difficult-to-serve-area
- Unbanked customers

Via Solution:

- On-demand solution connecting riders to five transit hubs
- Integration into broader transit network
- Integration with ORCA payment card
- Quality of service exceeding high-frequency bus routes

The Seattle Times

Need a ride to light rail? Metro launches shuttles to Tukwila, South Seattle transit stations



“ This project is a boon to Sound Transit’s mission: Connecting more people to more places. The innovative partnership with Via looks to a future where on-demand services work seamlessly with mass transit and builds ridership.”
- Sound Transit Board Chair, John Marchione

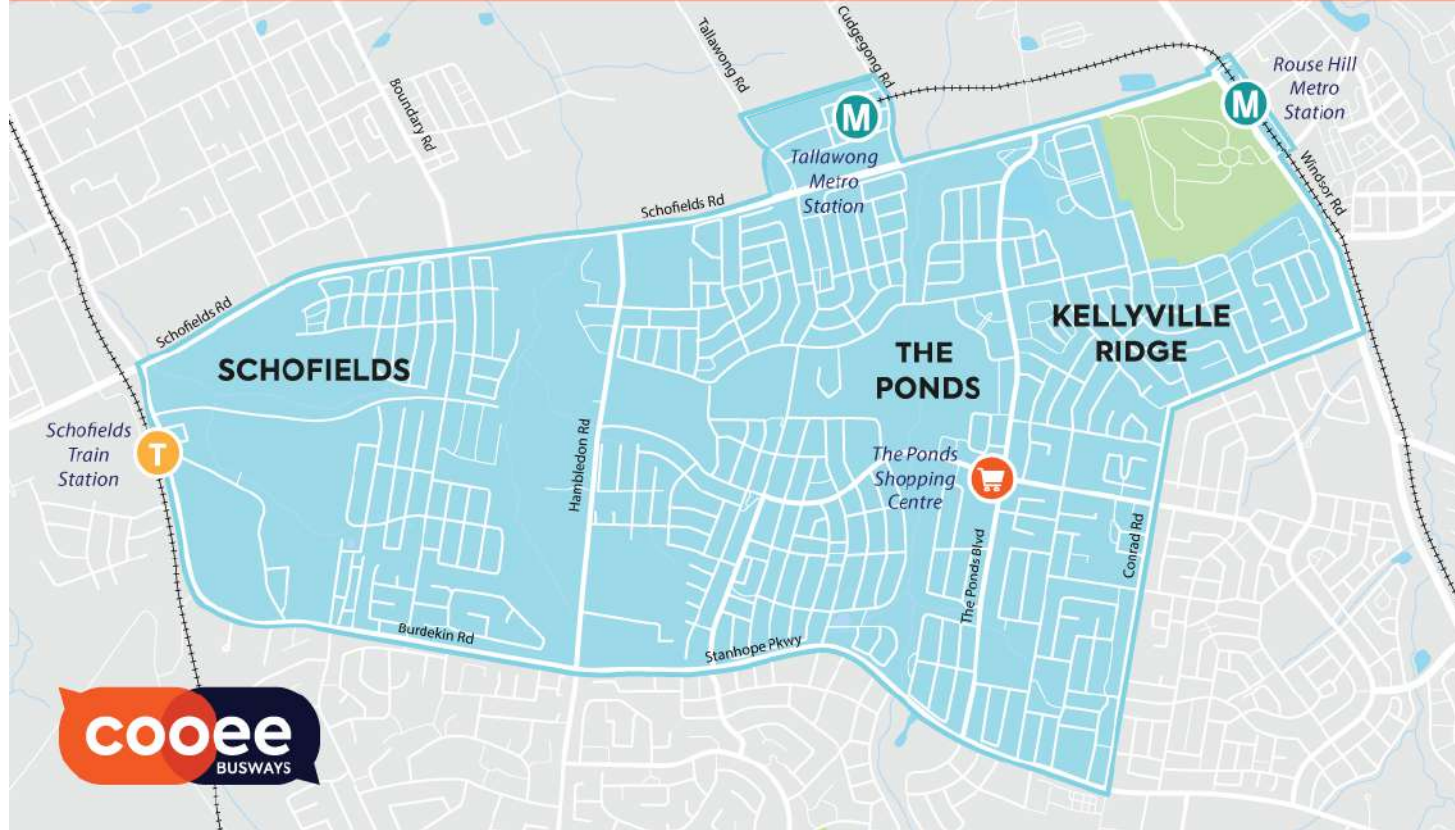


First Mile, Last Mile

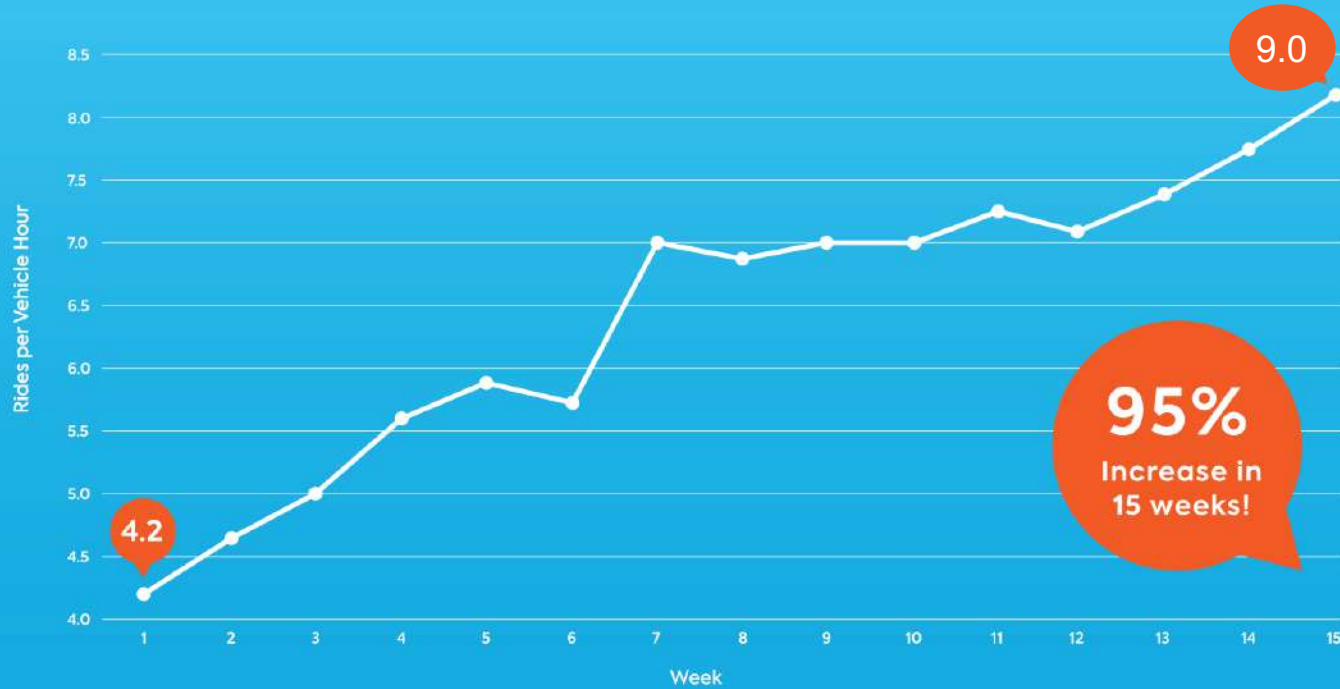
Busways Experience in The Ponds, NSW



COOEE BUSWAYS SERVICE AREA



UTILISATION

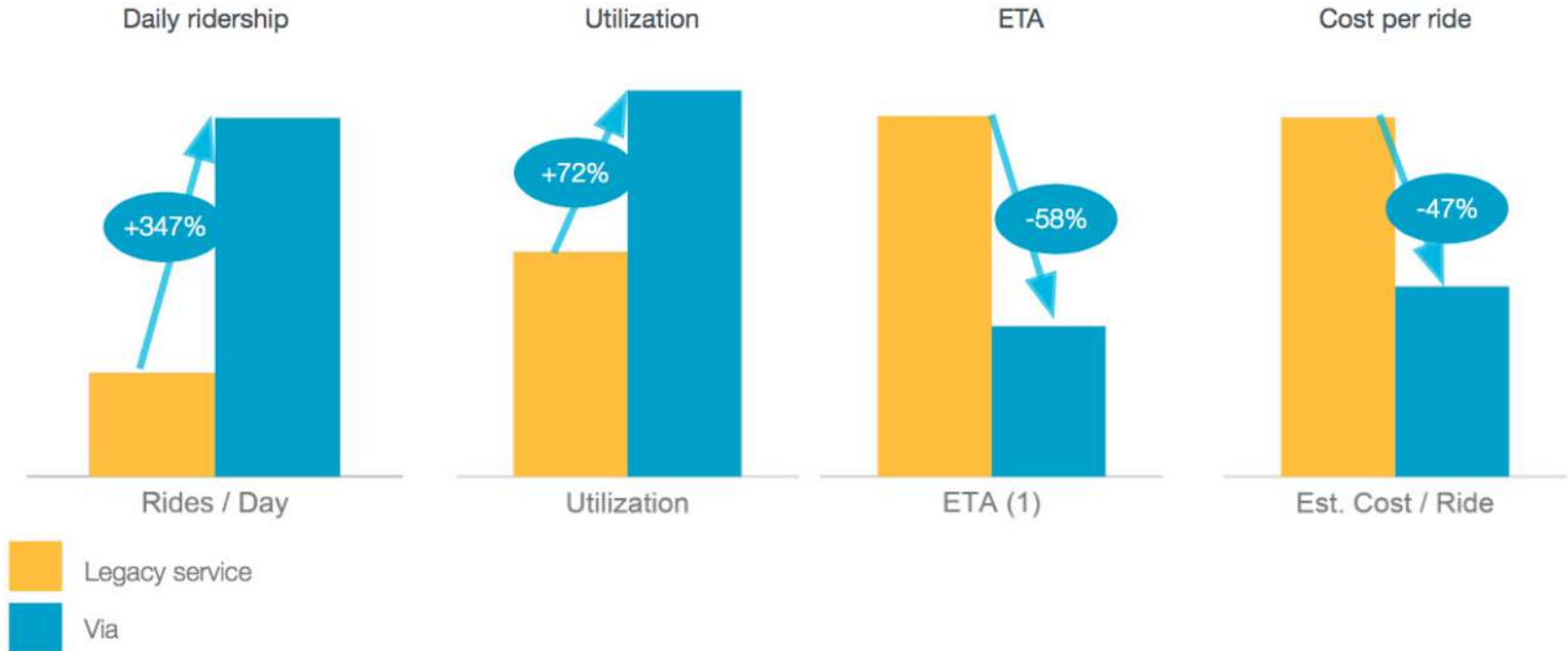




Route Optimization



When replacing underperforming fixed routes



(1) Based on 60-min loop. Excludes 1-hour during AM/PM weekday peak with 30-min loop.
Note: Utilization and cost figures estimated based on best available information.

Corporate Shuttles





Powering corporate shuttles for Google's main CA campus

Google

40

AVAILABLE VEHICLES

9

ZONES

~25k

EMPLOYEES AT MOUNTAIN VIEW CAMPUS

Situation:

- High single occupancy vehicle use
- Limited parking availability
- Congestion

Via Solution:

- Dynamic, on-demand shuttle
- Efficient commuting option for Googlers
- Highly replicable model for other Google campuses

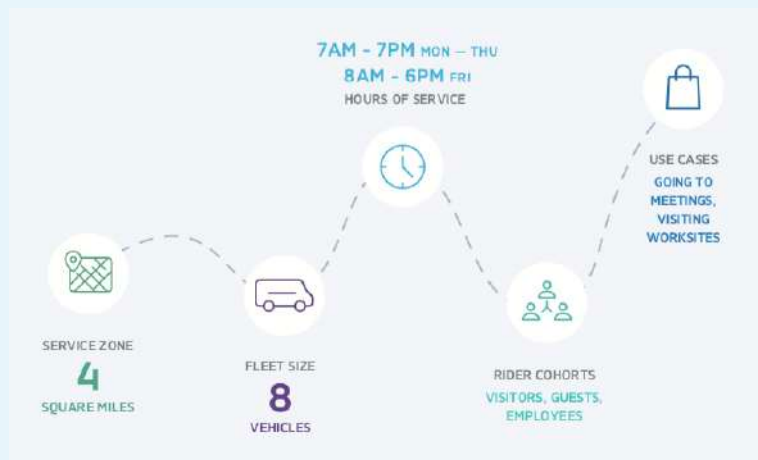
VIA2G



On-Demand and Fixed-Route Integration

BASF Standort Shuttle

- Launched **September 2018** at BASF's headquarters in Germany, the largest chemical complex in the world
- In addition to providing on-demand trips between the town and the company complex, **Via integrated with BASF's fixed-route bus network**
- Via's algorithm **automatically calculates which vehicles, either an on-demand , dynamically routed shuttle or a fixed route bus is best suited for the customer's trip** based on vehicle arrival and wait times, walking distances and other factors to deliver the best rider experience.



Paratransit

Tours, France | FilBleu

Modernized and streamlined paratransit operations

- **Upgraded legacy paratransit system** in the Tours and Aix-en-Provence regions of France
- Legacy service **required substantial manual** effort to schedule rides for passengers and coordinate driver shifts and **lacked data analysis and reporting** to verify quality of service requirements
- **Unique features** for a specialized paratransit operation:
 - Ability to book **pre-booked and recurring** rides in a mobile app
 - **Intelligent matching algorithm that optimizes routes** based on riders' requirements, service constraints and fleet configuration
 - Operational tools allowing **visibility and editing** of software-derived ride matching
 - Driver app that provides **turn-by-turn navigation**
 - Sophisticated tools for **data analytics and reporting**

20
Vehicles

350
Rides
delivered

5
operators



School Buses





Via For Schools



NYC Department of Education: Largest school district in the U.S.



NYC Department of Education

Via's School Bus Solution will soon be operating in New York City serving both general education and special education students.

engadget

Via shares its ride-pooling technology with NYC public schools

Its technology will be used to improve the current school bus system.



Launch

Fall 2019



Number of vehicles

9,500



Features

Parent / Student App
Bus Driver App
Administrative Tools

FASTCOMPANY

New York City's school buses will now be automatically routed and tracked using Via's algorithm

Ride-hailing disruption meets the classic yellow school bus in the country's largest school district, where complaints have dogged the city's attempts to get kids to school.



What does the future hold?



Experts agree on the importance of shared rides!



“THE ANSWER IS POOLING. If the question, is how to ameliorate traffic **congestion**, the answer is pooling. If it's how to reduce **climate change**, still pooling. **Social equity**? Also pooling. Soaring transportation **infrastructure costs**? Pooling! What to do about the potential negative effects of **automated vehicles** (AVs)? Pooling.

Going forward, **pooling must be the principal focus of our thinking and actions related to transportation.”**

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Thank you.

