

KEOLIS

AUTONOMOUS VEHICLE OPERATIONS OVERVIEW

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APTA Bus & Para, 05/06/18



AAA

Mashable



Focus on our long term trials Lyon Confluence – « Navly »



NAVLY

KEOLIS
LYON

The service provided:

- Free service – **2 autonomous shuttles** from **September 5th 2016**
- **Monday to Friday** (7:00 AM to 7:00 PM)
- **Peak hours: a shuttle every 15 minutes**
Off-peak hours : a shuttle every 30 minutes
- One path (**.83m long**) – 5 stops



Key assets of Keolis:

- 10 Keolis operators trained
- **Daily reporting:** via both supervision software & a web form completed by the onboard operators, developed by Keolis to track the attendance, the incidents and to qualify them
- **Relationship with the PTA (Sytral)**, being the historical transport operator of the Lyon area, and a preferred partner for innovation.

29,692 passengers

4894 hours of operation

14,189 m driven

and more than 450 official
delegations welcomed...

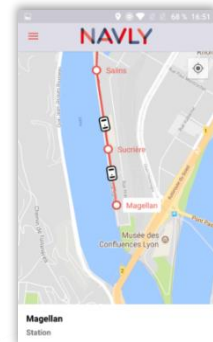
Data: End of March 2018



NAVLY mobile app:

Launched in September 2017
Available on both **Android** and **iOS** to offer to the passengers:

- **General information about the service:**
- **Real-time position of the shuttles**



KEOLIS

Focus on our long term trials

Paris La Défense

The service provided:

- Free service – **3 autonomous shuttles from June to December 2017**
- **7 days a week** (8 AM to 8 PM weekdays, 10 AM to 8 PM during weekends)
- **Peak hours: a shuttle every 10 minutes**
Off-peak hours : a shuttle every 20 minutes
- **3 paths** (total 1.2 m long) – 10 stops



Key assets of Keolis:

- 15 Keolis operators trained
- **Safety for daily operation:** in such a complex pedestrian area, Keolis operates the shuttles in the middle of the crowd thanks to its operators/supervisors on site
- **Responsiveness:** being in close relation with the site manager to anticipate the numerous events of the site (like the Christmas market) and ensure the service

33,575 passengers

2607 hours of operation

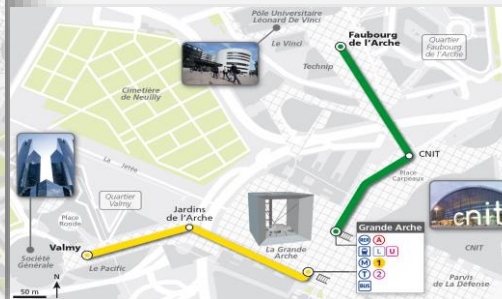
3,778.5 m driven

in the middle of the biggest business district of Europe...

Data: End of January 2018



The 1st test without driver in commercial use:



In November & December 2017, during off-peak hours

- **One shuttle has been tested successfully in operation with no operator on board**
- **The shuttle was operated autonomously in metro mode**

Autonomus Operation Stats

Lyon

- ▶ **Place** : Confluence district
- ▶ **Starting** : September 2016

14,189 miles driven
4,894 hours of operation
29,692 passengers



21,161

Miles driven
From 2016

5

Middle
to long term
trials

- ▶ **Place** : La Défense business district
- ▶ **Starting** : June 2017

3,778 miles driven
2,607 hours of operation
33,575 passengers



Paris

Paris

- ▶ **Place** : Paris CDG airport
- ▶ **Starting** : February 2018

1,140 miles driven
578 hours of operation
790 passengers

Las Vegas Pilot



Start: November 8, 2017

Duration: 1 year

Free service – **1 shuttle**

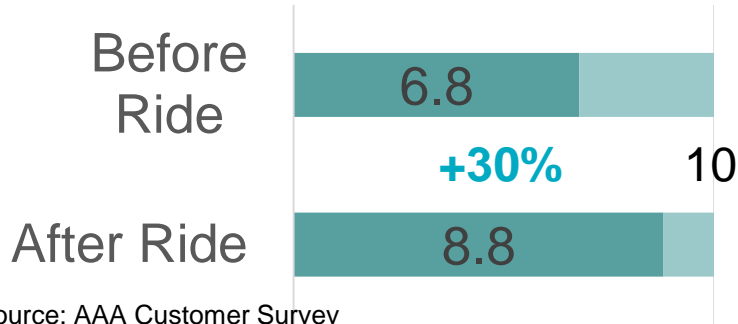
Runs from 1pm to 9pm

Length: ~ 0.6m/ (3/5 Miles)

23,275 passengers (As of 5.2.18)



“Autonomous Vehicle Sentiment”



“Recommend experience to a friend”

98% Yes



“Rate your Driver”

“Lessons Learned”



In High Demand:

- Strong interest in new technology buy cities agencies and local business private.




Operations:

- Insurance; new market
- Collaboration with city infrastructure.
 - Coordination of local Police and Fire departments for training of AV Technology

Las Vegas – Autonomous Shuttle Media Coverage

Earned Media at a Glance

1000+ News Hits	26.43 Billion Unique Viewers	\$1.5 Million Total Publicity Value
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Forbes	 REUTERS	Bloomberg Technology	The Washington Post
	 USA TODAY <small>A GANNETT COMPANY</small>	THE WALL STREET JOURNAL.	BUSINESS INSIDER
Mashable All That's New on the Web		WIRED	

KEOLIS

AUTONOMOUS VEHICLE OPERATIONS OVERVIEW

This is just the beginning.

