



# Leveraging Demand-Response Technologies to Modernize Paratransit Systems in Latin America

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# Research Question

Can **paratransit** services leverage **demand-response** technology to overcome existing **negative externalities**?

Traditional  
Paratransit



## Motivations

Is there interest to adopt technology to improve services?

## Barriers

What is preventing the adoption of technologies?

## Enablers

What tactics can support the adoption of technology?

Demand Responsive  
Technology  
(Microtransit Model)





# Project Information



**Location:**

Mexico City

**Timeframe:**

January 30<sup>th</sup> - Feb 26<sup>th</sup>

**Target Group:**

Paratransit Drivers

**Total # of Interviews:**

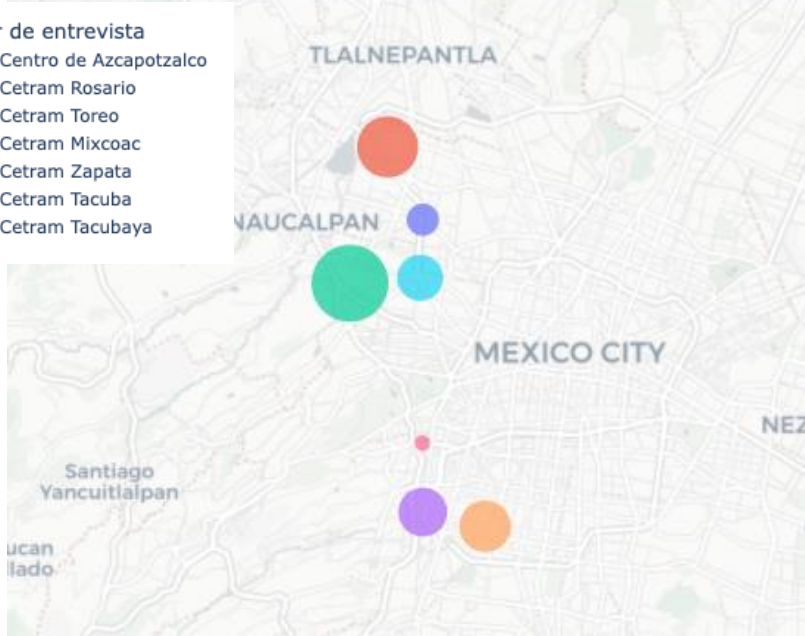
68



# Interview Details

## Lugar de entrevista

- Centro de Azcapotzalco
- Cetram Rosario
- Cetram Toreo
- Cetram Mixcoac
- Cetram Zapata
- Cetram Tacuba
- Cetram Tacubaya



## Micros

Size: 23 seated, ~40 standing


Num. interviewed: 26

## Combis

Size: 19 passengers

Num. interviewed: 30



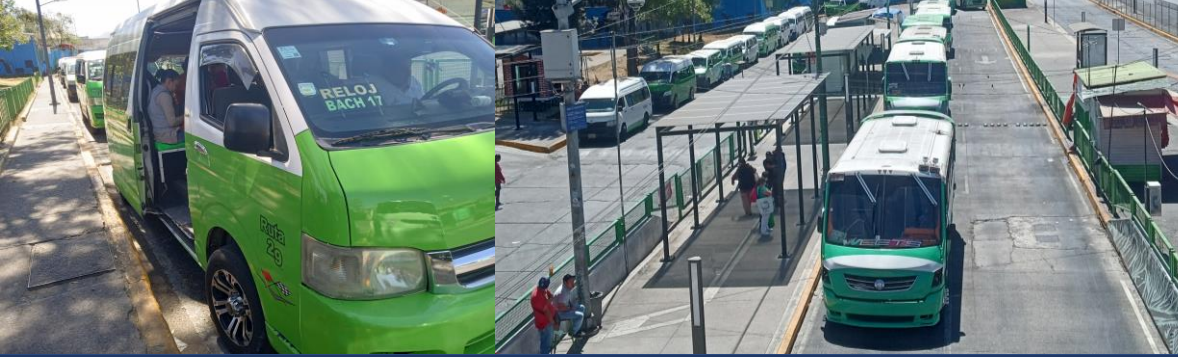


# Understanding current services and driving conditions

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# Working conditions of drivers



**Gender:**  
67 Male  
1 Female



**Age:**  
42-year average



**Years working in the field**  
19-year average



**Vehicle Owners:**  
15% of drivers



**Vehicle Rent**  
\$930 MXN = ~\$50  
USD



**Disposable Income**  
\$530 pesos = ~\$29  
USD



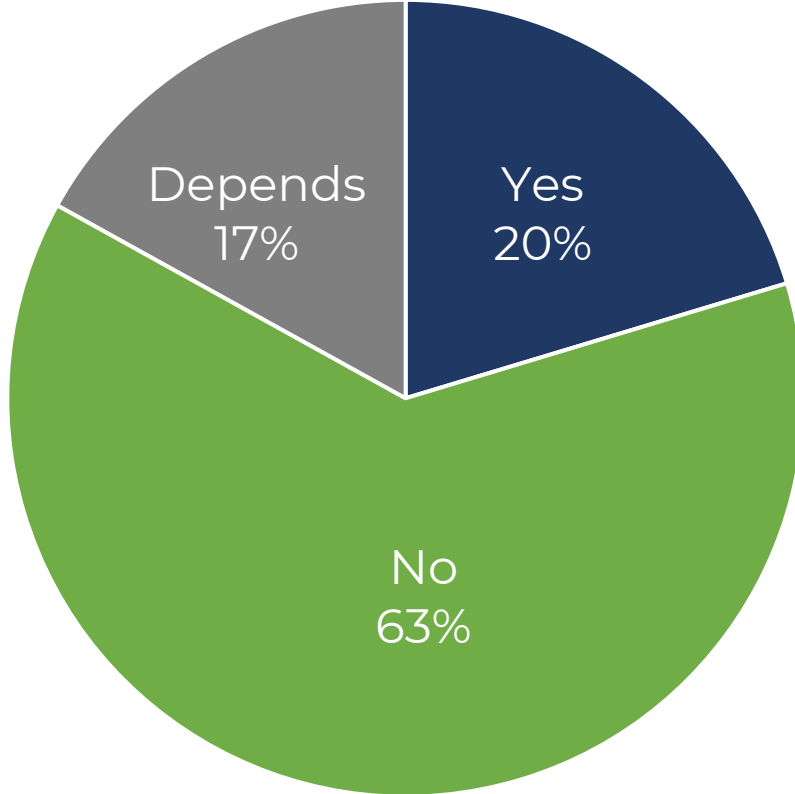
**Hours per Day**  
14 hours avg.



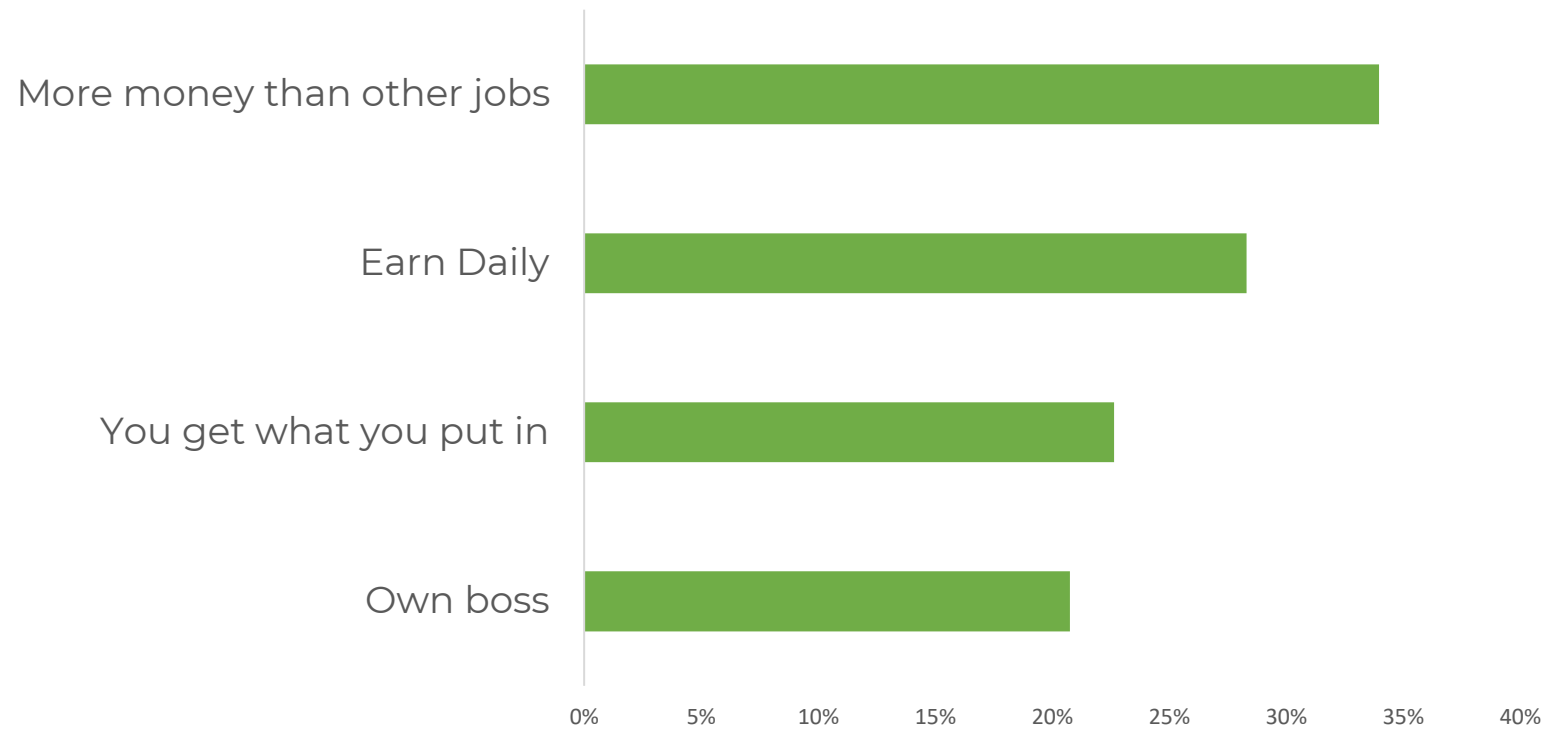
**Days per week**  
6 days



# Would you prefer a fixed salary option?



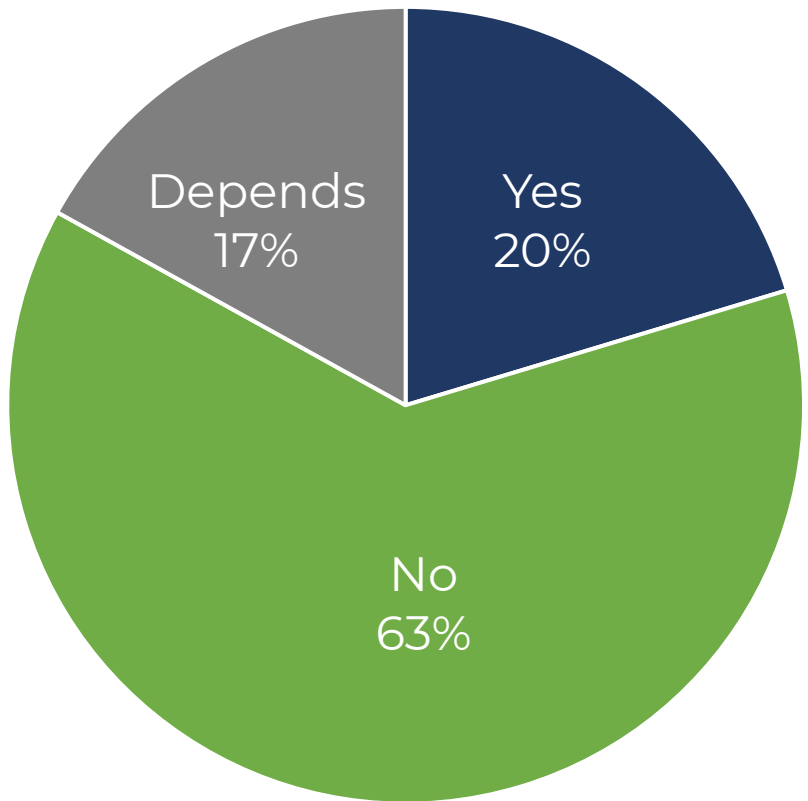
## Reasons why they like *variable income*



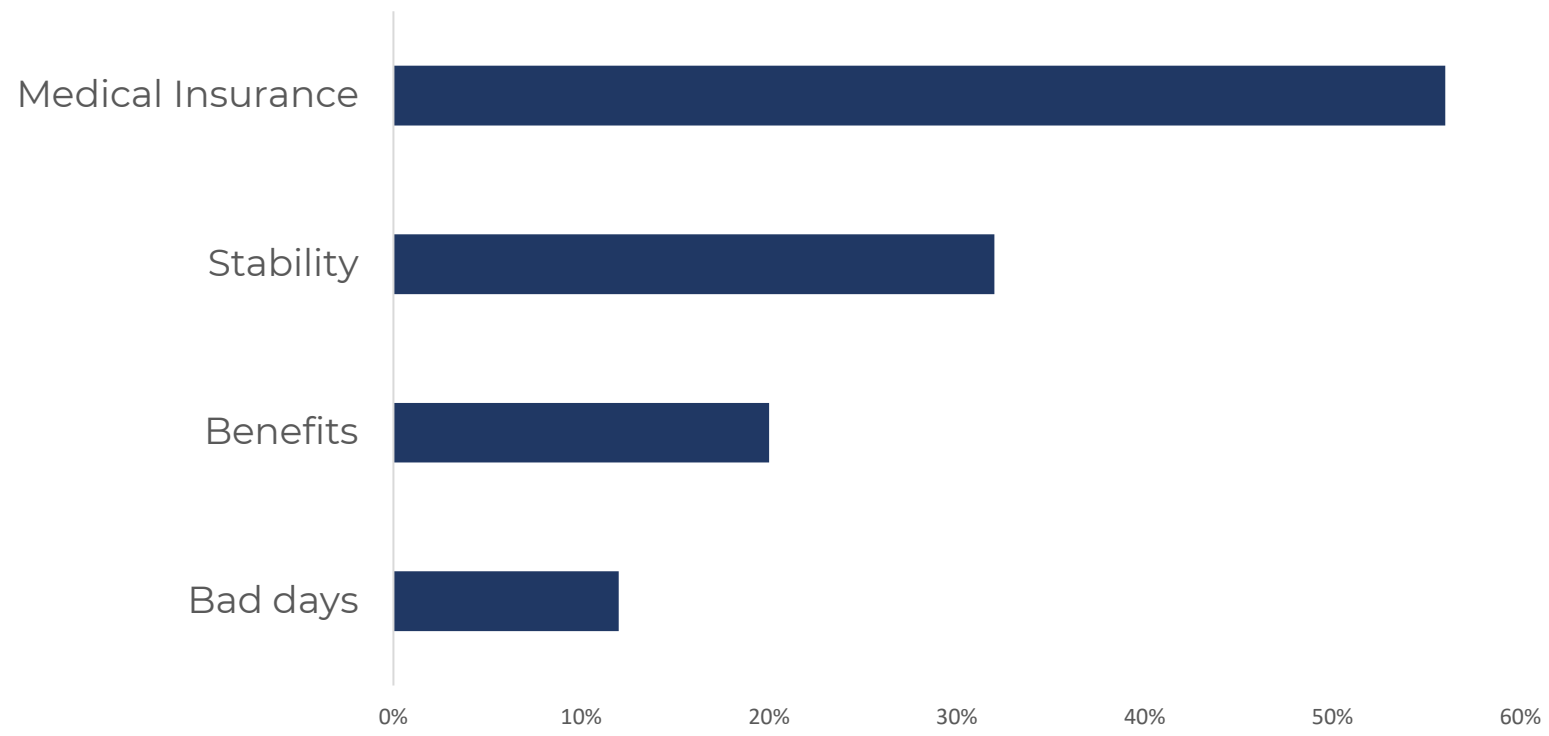




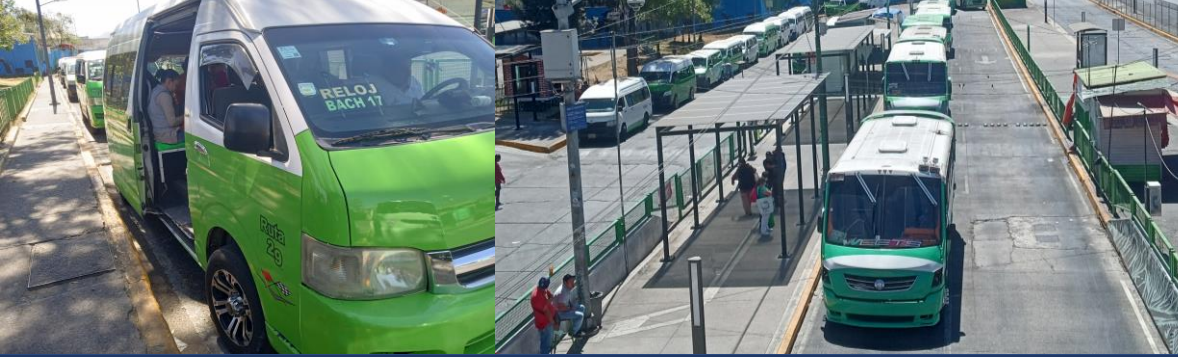
# Would you prefer a fixed salary option?



## Reasons why they would like a *fixed salary*







Do you like working in this service?

69% said **Yes**

31% said **No**

What do you like?

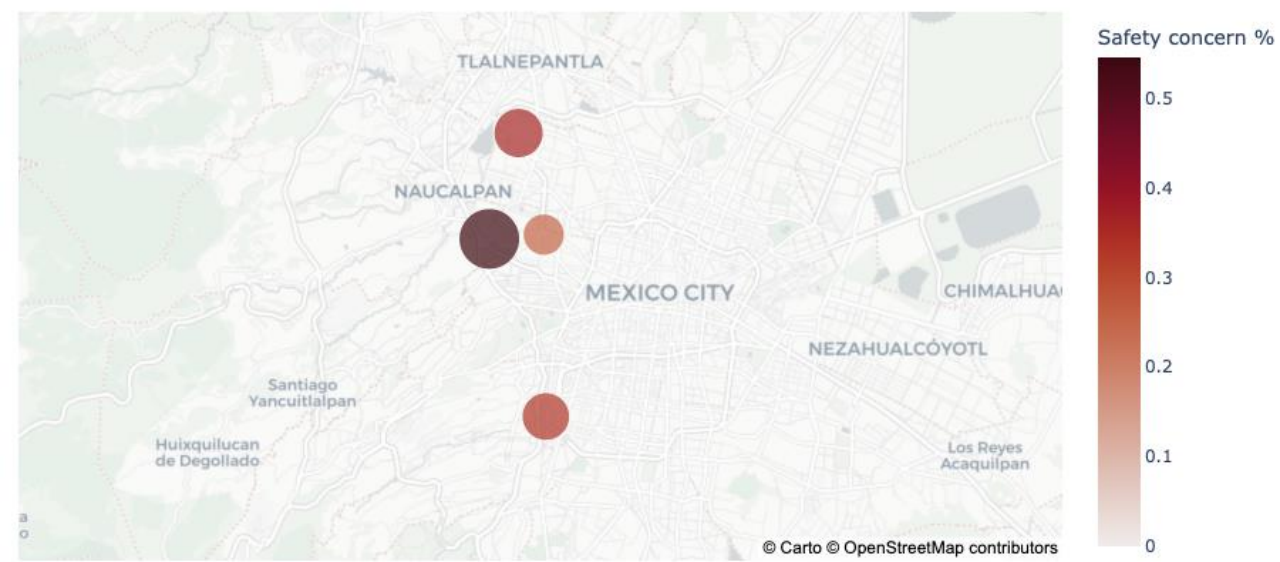
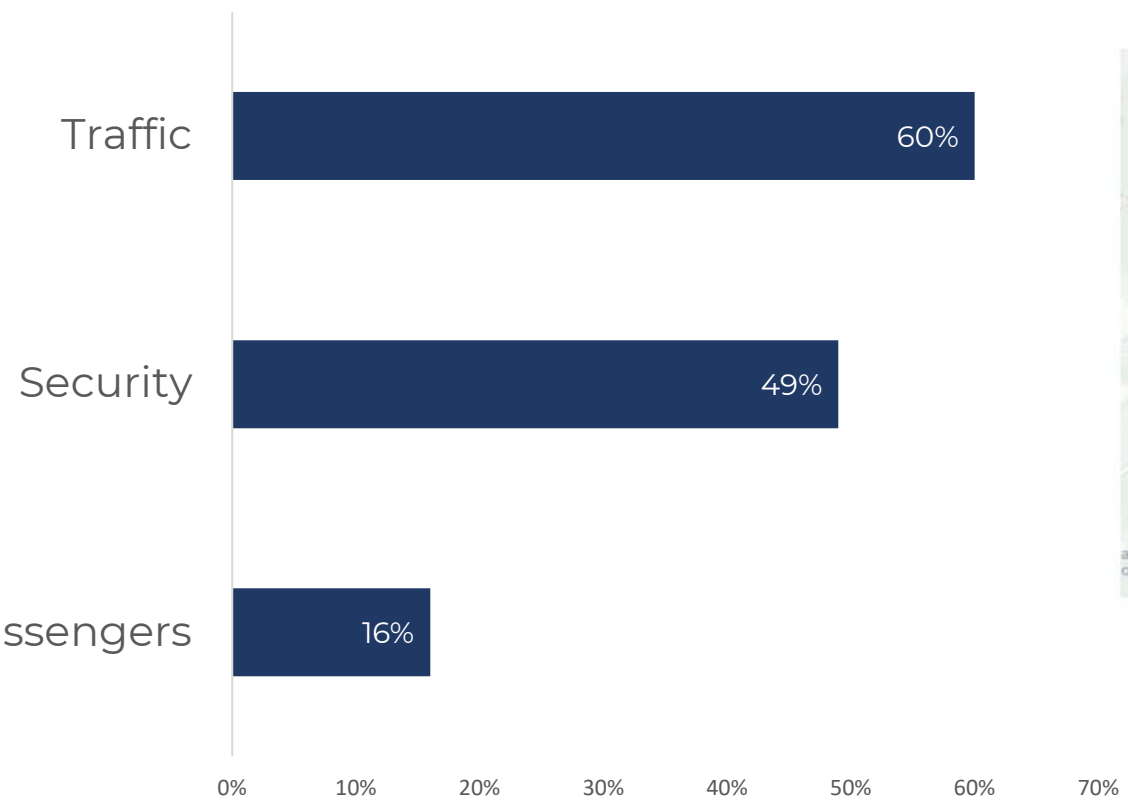
What would you change?

own-boss  
community  
money  
flexibility  
likes driving  
new experiences  
outdoors

bad-driving  
abusive authority  
tariff  
safety  
passengers  
traffic  
problematic drivers  
drug use  
demanding  
driving  
bad driving  
fix-stops  
checadores  
medical insurance  
long-hours  
no benefits  
bad environment  
norules  
stressful  
risky  
bad  
bad-environment



# What are the biggest problems you face in your work daily?





# Feelings towards Demand Response Technology

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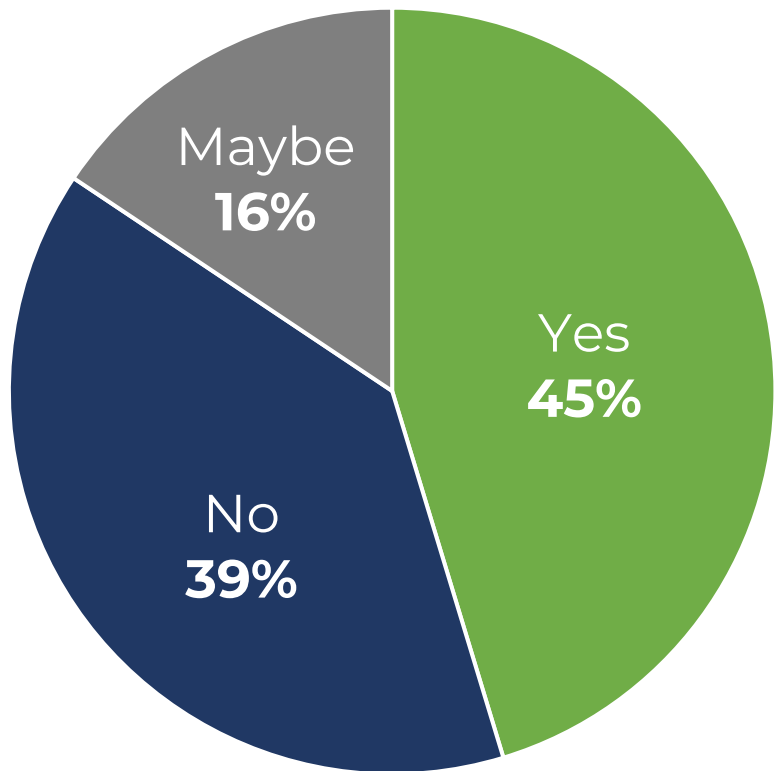


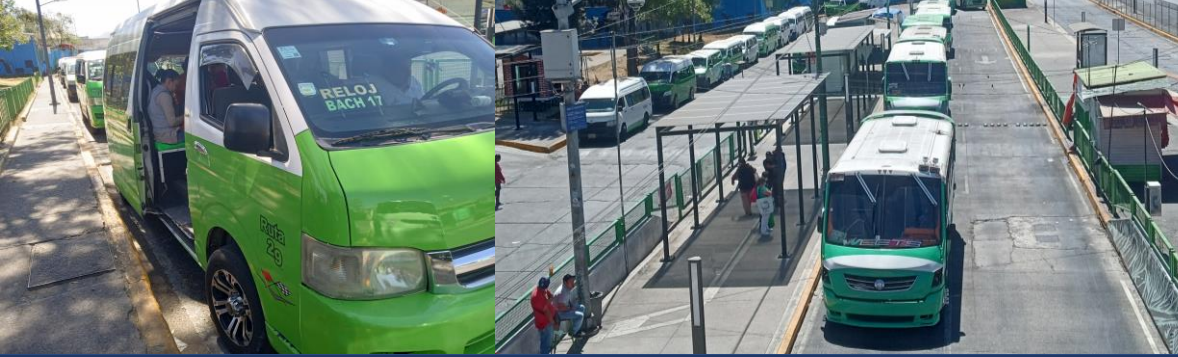






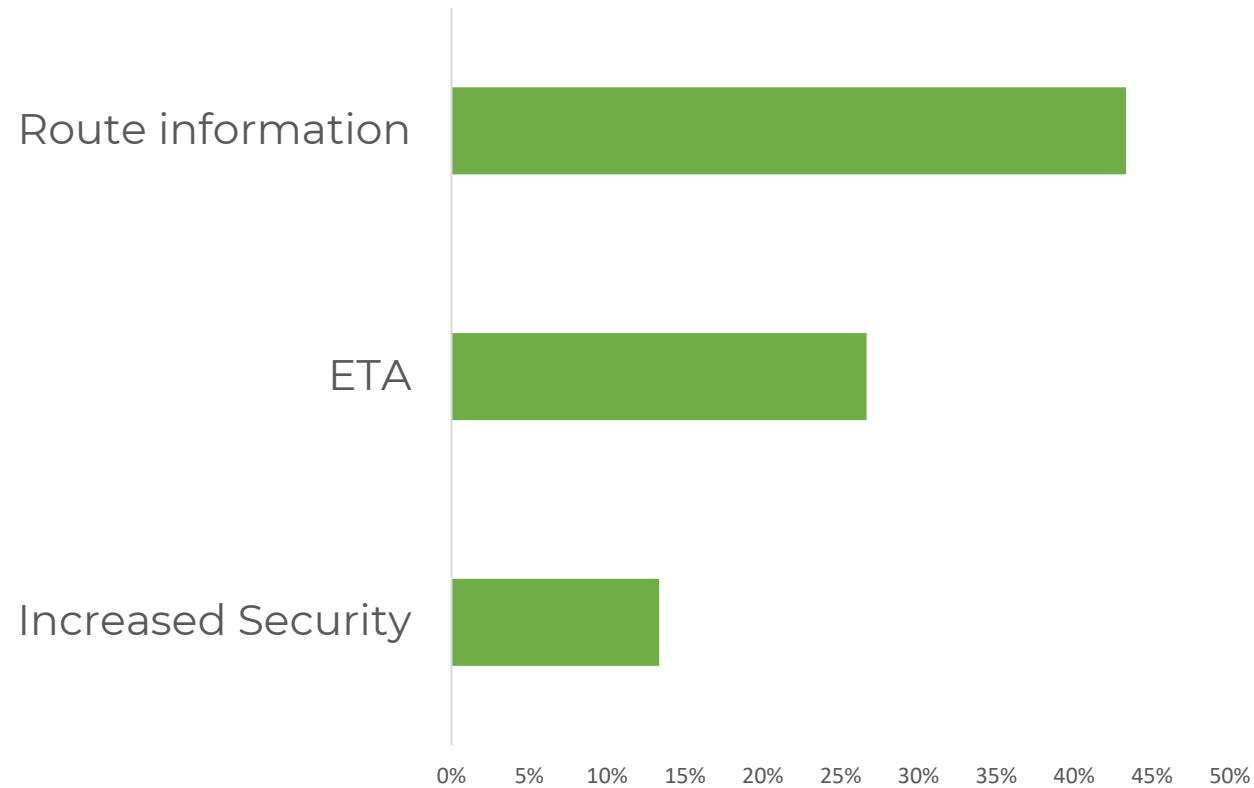
Do you think Demand Response Technology would be useful in your service?



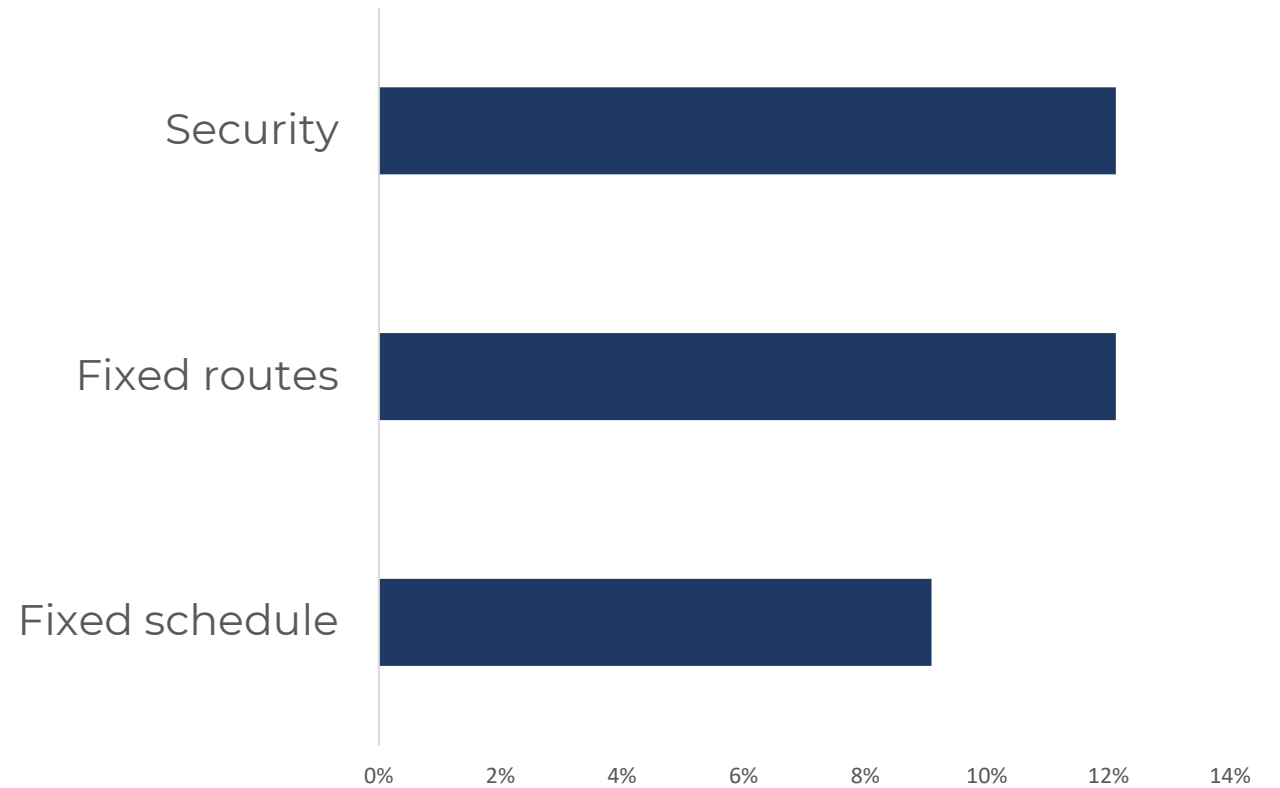


# Perception of DRT in service

## Advantages Tech



## Perceived Disadvantages







Who has the decision-making power to adopt these technologies?



**Route Directors/owners**

77%



**Government**

28%



**Drivers**

5%

# Observations from the field

- Passengers constantly **ask drivers** if they stop by X location
- Drivers work with “checadores” to bring them **more passengers**
- Paratransit has **fixed routes, but divert** due to traffic or closures
- WhatsApp group to update on service

# Learnings for DRT in Mexico City

## Valuable Characteristics:

- Route Information & ETA for Passengers
- Information on passenger for increased security
- Daily Cash out

## Considerations for DRT:

- Routing less useful given Fixed Routes
- Checadores are competition for dynamic scheduling







Thank you!

