

# THE TRANSFORMATION OF THE TAXI INDUSTRY: THE CASE OF TEO TAXI, MONTREAL-BASED TAXI SERVICE

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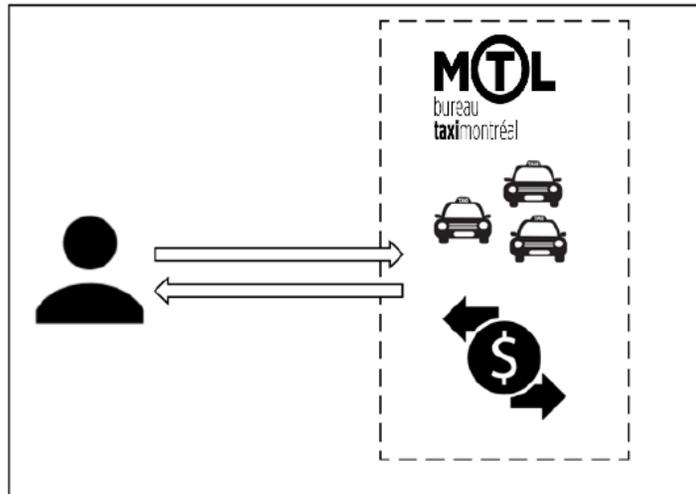


# FORWARD

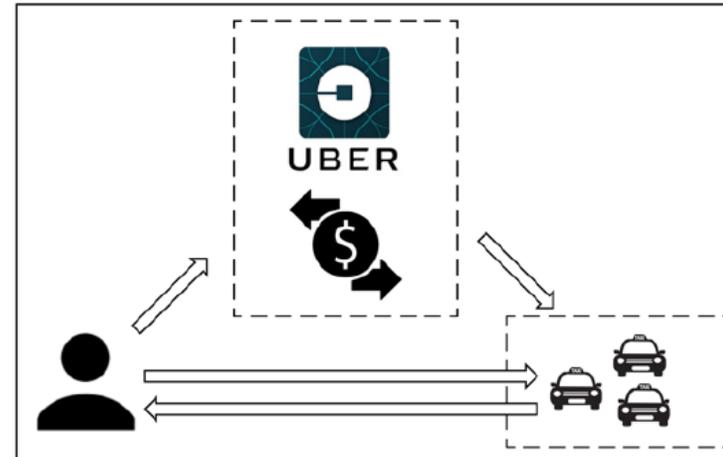
- ‘We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, and complexity, the transformation will be unlike anything humankind has experienced before (Schwab 2016)

# TAXI INDUSTRY

- Centralized Taxi Industry: For example in Montreal, Bureau du taxi de Montréal



## Decentralization



# DISRUPTIVE TECHNOLOGY

- Oil vs electricity
- Living wage & life work balance VS traditional taxi
- Policy and society change
- Modernity vs traditional
- Technological driven & Constant innovation



# CITIES ARE FACING MAJOR CHALLENGES

- Almost constant traffic congestion
- Steady increase in the number of vehicles, cars and trucks
- Expensive road maintenance and construction costs
- Air pollution:
  - **More than 5.5 million people worldwide are dying prematurely every year as a result of air pollution, more in China and India ( according to the [Global Burden of Disease project](#), 2016)**

# THE TRUE COST OF OWNING A CAR

- PRIVATE CAR OWNERSHIP IS DIMINISHING OUR COLLECTIVE WEALTH

If walking costs you \$1



Society pays 1¢



If cycling costs you \$1



Society pays 10¢



If taking the bus costs you \$1



Society pays \$1.30



If driving your car costs you \$1



Society pays \$9.30



# TRADITIONAL TAXI

- Taxi owner's permit: issued via a quota system. Each permit is assigned to a specific vehicle.
- In Montreal, a taxi owner's permit costs \$200,000.
- A taxi driver's permit and 150 hours of training required by the Bureau du Taxi de Montréal.
- 2 types of drivers: those who own a taxi permit and those who rent a permit (\$600/week).
- An intermediary company provides: dispatch service, tablet, machine for card transactions.

# TRADITIONAL TAXI

- Supply & demand issues
- Difficult working conditions
  - 100,000 km/year
  - 10- to 16-hour days, 6 days/week
- Insufficient income
  - Daily income before expenses is \$175 to \$200
  - Equivalent to  $\approx$  \$8/hour after expenses

# THERE ARE A LOT OF TAXIS IN MONTREAL



Montreal: 1 taxi per  
**417 residents**



Toronto: 1 taxi per  
**800 to 1,000 residents**



New York City: 1 taxi per  
**600 residents**

**19**  
taxi companies

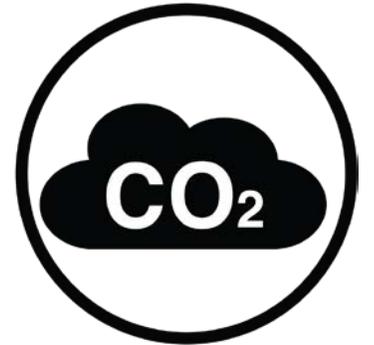
**4,436**  
regular taxi permits

**11,000**  
drivers

Around 30%  
of drivers own a taxi permit

# THE INDUSTRY IS AT RISK

- Dependence on fossil fuels:
  - The industry produces 100,000 tons of greenhouse gases every year
  - Fuel costs are eating into profits
- Technologically behind:
  - Aging infrastructure
  - Safety issues
  - No technologies to optimize distribution



# METHODOLOGY

Case study of TÉO

Series of open-ended Interviews:

- With the CEO
- Chief Technology Office
- HR
- Taxi drivers (both Téo and non Téo)

# DISRUPTION: ELECTRIC TAXIS

Regular taxis are fuel-powered:

Average fuel consumption: 14 L/100 km x 100,000 km/year

Compared to electric taxis:

at \$0.80/L = \$11,200 per year in savings

at \$1.50/L = \$21,000 per year in savings

Minimal maintenance costs: \$300/year (Téo)

**\$6,950** subsidy from the Quebec government for every electric vehicle purchased

**Higher purchase price, but greater savings down the line**

# TÉO CHANGED THE MODEL?

- In November 2014, Alexandre Taillefer unveiled a plan for a taxi service like no other: Téo.
- **5 key objectives:**
  - work with the industry (compliance with regulations)
  - build an all-electric taxi fleet
  - develop a top-notch app
  - use IT to optimize fleet management
  - offer drivers decent working conditions

# WORKING WITH THE INDUSTRY (CHANGE FROM WITHIN)

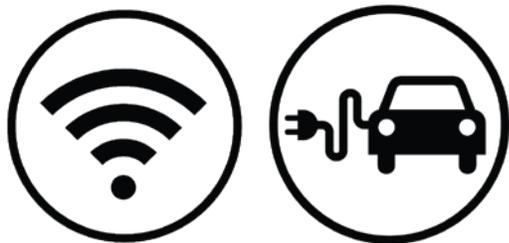
## **As part of a pilot project:**

- Allow taxi permits to be assigned to more than one vehicle
- Lease taxi permits
- Hire professional drivers with a taxi driver's permit: trained by industry standard
- No intermediary company: Teo provides dispatch service, tablet and all other related services are all in-house



# ELECTRIC TAXI FLEET

- 100% electric
- Connected at all times
- Silent and non-polluting
- Free Wi-Fi for customers
- Fast charging (30 min.)
- Dedicated charging stations





# USING TECHNOLOGY

Reliable, user-friendly app

Precise real-time data

Increased security for driver and passenger:

- a) real-time vehicle tracking
- b) in-car camera

Automatic payment via the app: no cash

Automatic tax calculation

The user knows the driver, Teo has information from the passenger through the application



# USING TECHNOLOGY

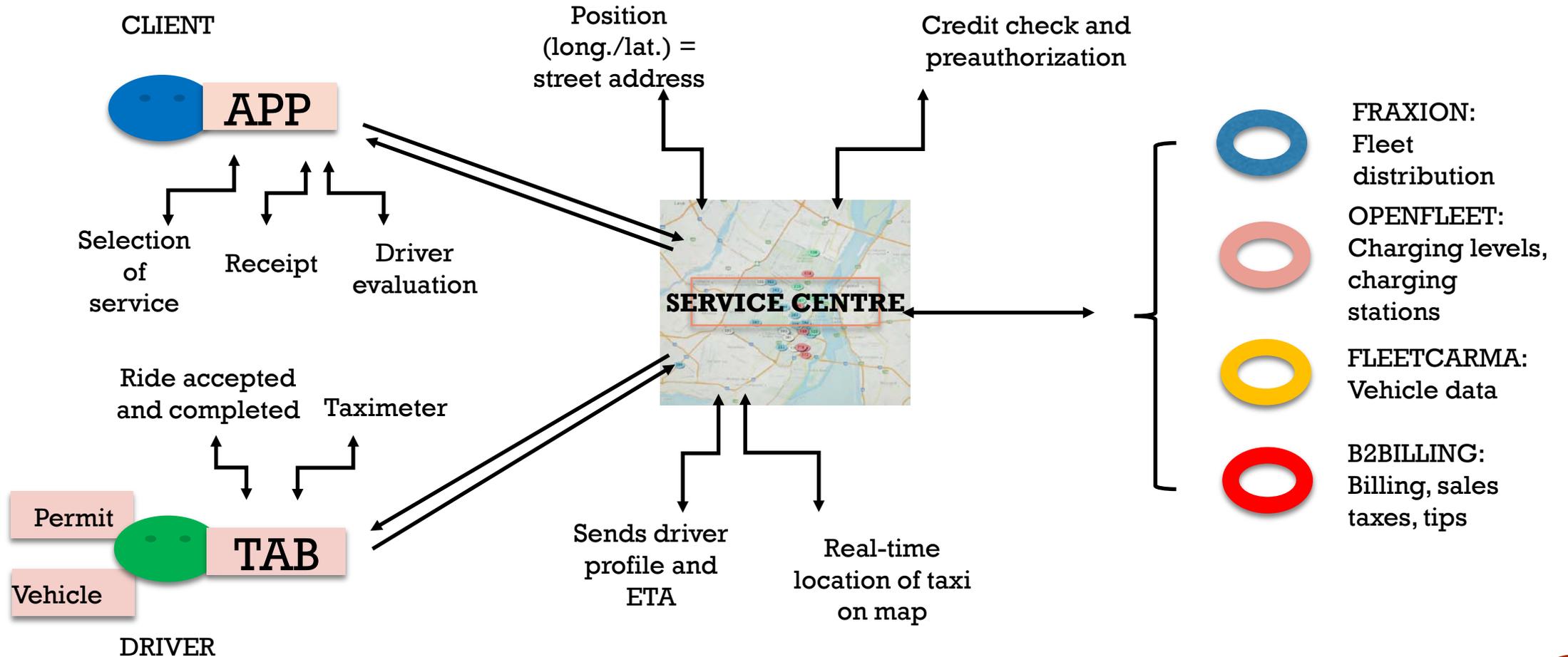
- Ongoing data collection: wait times, vehicle occupancy rates, cancellation rates, average hourly income, charging levels, wear and tear per kilometer, etc.

## **Data analysis to optimize the fleet**

- Reduced wait times
- Increased coverage density
- Enhanced vehicle performance



# USING TECHNOLOGY



# USING TECHNOLOGY

- Dynamic digital signage (2 on-vehicle displays)
- 1 dedicated tablet for customers with informative, entertaining content

- All the technology is in-house



# WHAT'S SO INNOVATIVE ABOUT TEO?

- Changing the conversation :
  - From fuel to electric
  - From minimum wage to living wage, life work balance
  - Challenging the traditional taxi business model,
  - Challenging the legitimacy of Uber, advocating for better legislation: Conform, pay taxes or leave
- **Influencing the competition to do better:**
  - Other taxi companies are considering hybrids cars
  - Customer service will improve with the competition
  - Diversity of offer

# TÉO: A BOLD PROJECT

- **2018–2019:**  
**Expansion in 5 cities, including: Montreal – Quebec City – Toronto**

**Plans to export the Téo model**