ATLAS A.I.

Which one is better? Taxi, Grab or Uber?
Singapore Ride Hailing Service Comparison

1. WHO?

COMFORTDELGRO
CityCab · Comfort · SBS Transit
Grab
UBER

2. WHY?

01 High operation risks of e-hailing services
02 Deviation from sharing economy
03 Unfair competition dynamics
04 Lack of self-regulating mechanism
05 Disconnection from urban planning

3. HOW?

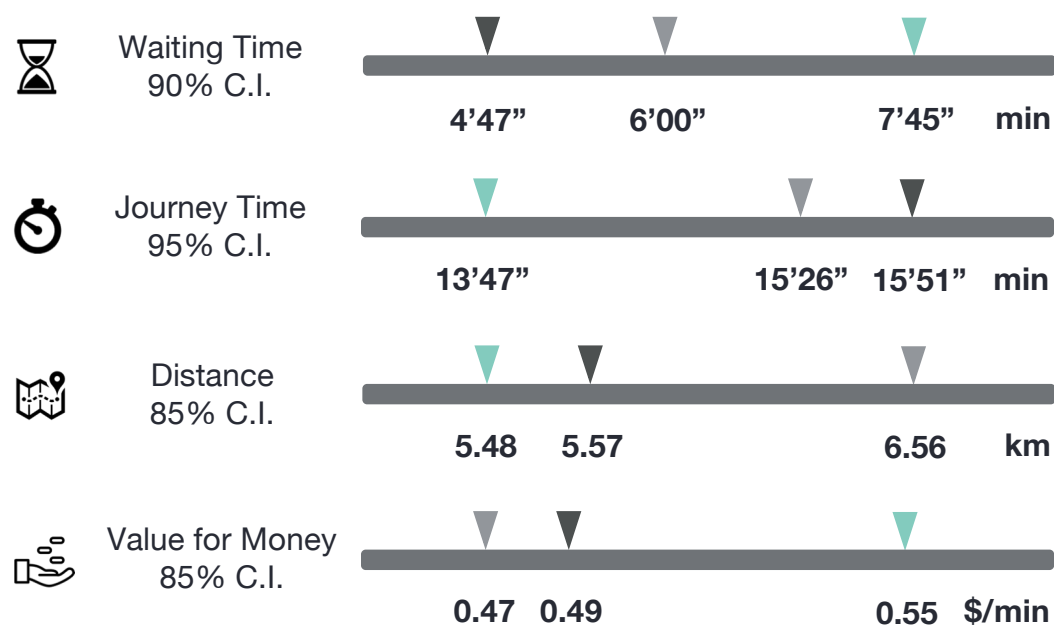Mobile sensing + A.I. technology to evaluate and regulate

4. CONCLUSIONS

- **Best value for money – Taxi**
- **Safest transportation – Taxi**
- **Best option under demand surge – Uber**

- In light of the competition in ride-hailing industry, the governments are always on the receptive end of disruptive technology. Why not using similar technology to regulate the industry?
- Data collection was conducted in February 2017, covering AM, Interpeak, and PM periods with 140 routes in Singapore, in order to objectively access the service providers in the market.
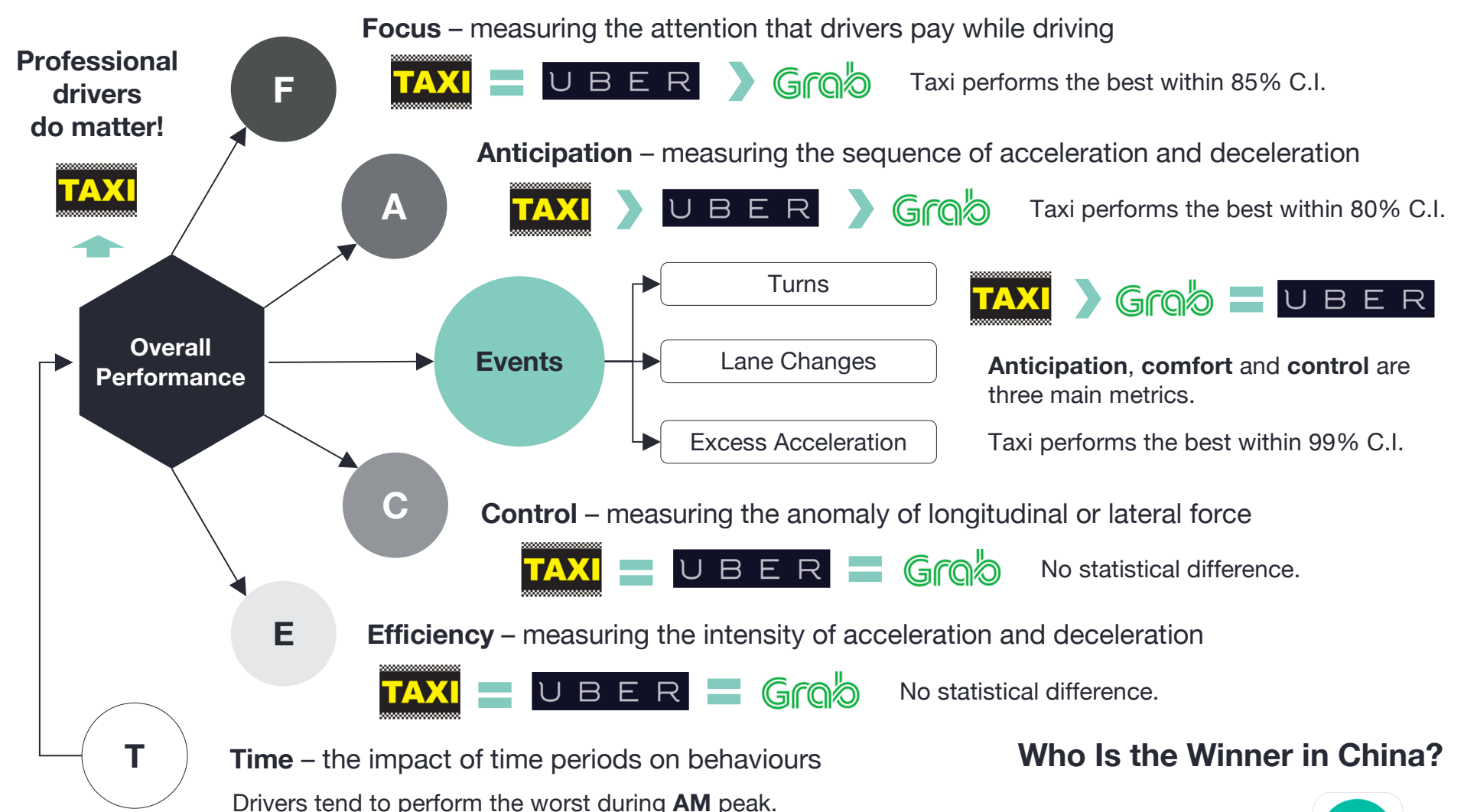
5. ECONOMICS (AM PEAK)

Waiting Time 90% C.I.
4'47"   6'00"   7'45"   min

Journey Time 95% C.I.
13'47"   15'26"   15'51"   min

Distance 85% C.I.
5.48   5.57   6.56   km

Value for Money 85% C.I.
0.47   0.49   0.55 $/min

▼ Taxi   ▼ Grab   ▼ Uber

- Taxi has the longest waiting time of all three during AM peak.
- On the contrary, it takes the least amount of time for taxi to finish the ride service.
- Taxi drivers are more familiar with the road networks and do not rely on GPS navigation apps. They often choose the shortest routes.
- Value for money measures the monetary value that consumers get for each minute spent on a journey. Taxi is the most economical option.
- Under demand surge, Grab tend to have higher price than Uber due to short supply of vehicles.

6. SAFETY (DRIVING BEHAVIOUR PROFILING)

Professional drivers do matter!

TAXI

Overall Performance

F
A
C
E
T

Events
- Turns
- Lane Changes
- Excess Acceleration

Focus – measuring the attention that drivers pay while driving

TAXI = UBER ＞ Grab   Taxi performs the best within 85% C.I.

Anticipation – measuring the sequence of acceleration and deceleration

TAXI ＞ UBER ＞ Grab   Taxi performs the best within 80% C.I.

TAXI ＞ Grab = UBER

Anticipation, **comfort** and **control** are three main metrics.

Taxi performs the best within 99% C.I.

Control – measuring the anomaly of longitudinal or lateral force

TAXI = UBER = Grab   No statistical difference.

Efficiency – measuring the intensity of acceleration and deceleration

TAXI = UBER = Grab   No statistical difference.

Time – the impact of time periods on behaviours

Drivers tend to perform the worst during **AM** peak.

Who Is the Winner in China?

滴滴 vs. 美团