



# Bluebird Taxi Fleet Electrification

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Presented in  
**IESR Webinar**

Jakarta

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A photograph of two men standing in front of a backdrop. The man on the left is wearing a light-colored batik shirt and glasses, and is holding a framed certificate. The man on the right is wearing a dark suit jacket over a batik shirt and glasses. The backdrop features the Bluebird logo (a stylized bird) and the word "Bluebird". Other text on the backdrop includes "gitJakarta", "#Biru", "Launch of In", and "April 2".

# Bluebird and EV pioneering

# Blue Bird Group

PASSENGER TRANSPORT



**> 30,000** vehicles nationwide  
**> 35,000** drivers and employees  
**> 600** exclusive outlets  
**75** pools nationwide  
**20** cities

My BLUE BIRD  
MEDAN

Medan

Padang

Pekanbaru

Batam

Pangkal Pinang

Palembang

My BLUE BIRD  
JAKARTA

Banten

Jakarta

My BLUE BIRD  
BANDUNG

Bandung

Yogyakarta

My BLUE BIRD  
SURABAYA

Semarang

Solo

Surabaya

Bali

My BLUE BIRD  
BALI

Lombok

Makas

Balikpapan\*

Manado

Pontianak\*

# National urge for emission reduction

The country's emission reduction target is far from being achieved and seems to be eclipsed by the exponential growth of number of vehicles put on the road

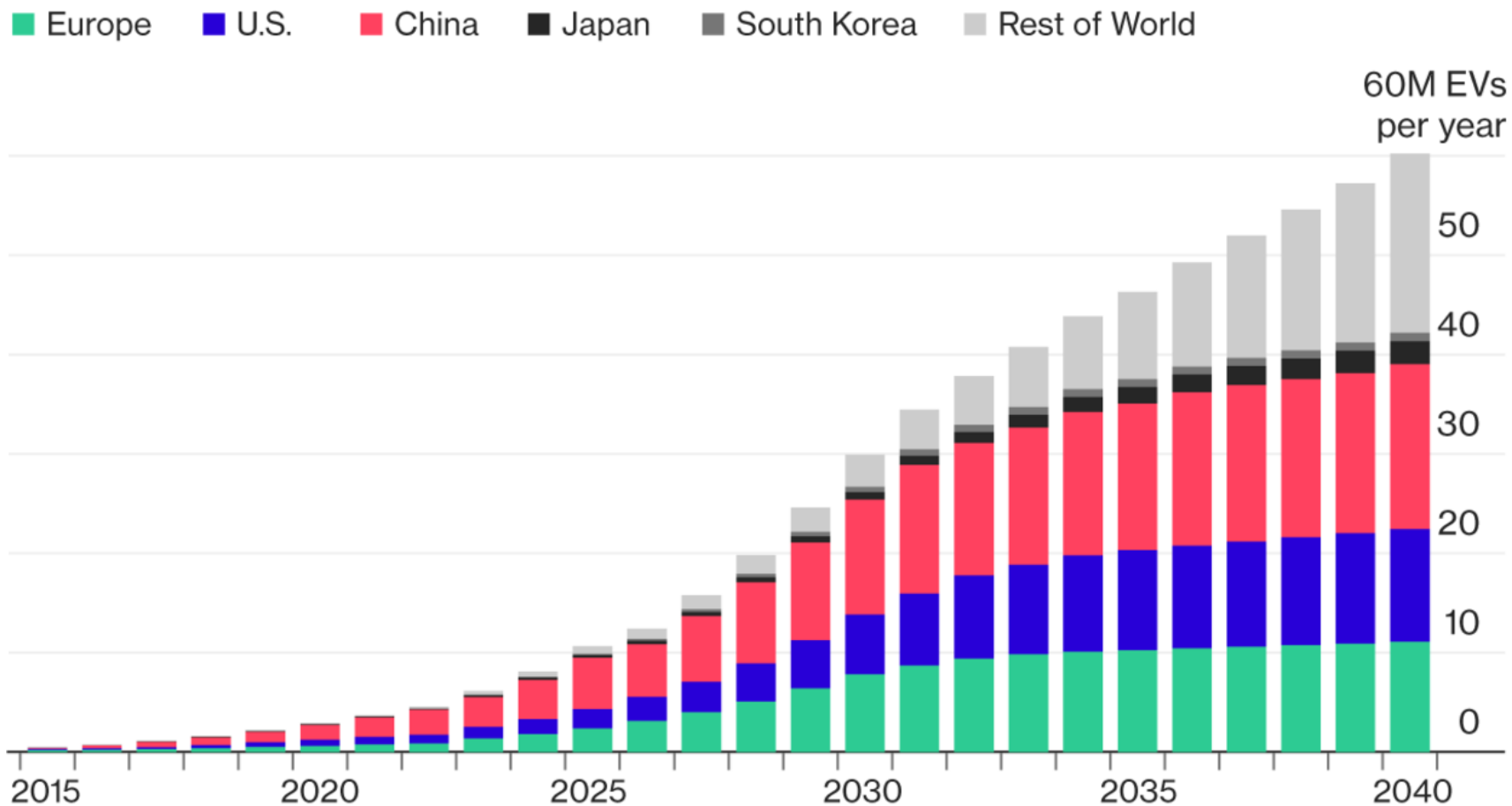


More personal vehicles on the roads

More concentration of vehicles in urban areas

More urban areas going forward

# EV ERA IS INEVITABLE – SOONER OR LATER



Source: Bloomberg New Energy Finance

**Bloomberg**

## DEVELOPING AND DEVELOPED COUNTRIES HAVE BOTH STARTED TO ADOPT EV FOR TAXI

<b>Country</b>	<b>First launch</b>	<b>Country</b>	<b>First launch</b>
1. Albania	2014	13. Taiwan	2014
2. Brazil	2014	14. Inggris	2014
3. Bulgaria	2012	15. Amerika Serikat	2016
4. Kolombia	2013	16. Uruguay	2016
5. Kosta Rica	2013	17. India	2019
6. Meksiko	2011	18. Spanyol	2018
7. Singapura	2017	19. Emirat Arab	2018
8. Taiwan	2014	20. Norwegia	2013
9. Cina	2010	21. Swedia	2017
10. Belgia	2014	22. Korea Selatan	2014
11. Hong Kong	2012	23. Jepang	2014
12. Belanda	2013		

# BLUEBIRD IS IN POSITION TO JUMPSTART INDONESIA EV ADOPTION

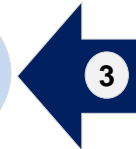
## The largest taxi fleet size in the country

Allows for operation and financial economic of scale, thus gives influence and impact towards industry regulation



## Decades of proven own fleet maintenance, and service delivery

In the leading position to operate EV and EV-services for commercial fleet



## Technology readiness & Business model flexibility

Provides the capability to experiments with the right mix of IoT / AI / machine learning, Fixed & dynamic pricing, omni channel / MaaS



## Significant in-city land ownership

Easily establish and operate charging stations in own premise without highly depended on public charging infrastructure for its daily operation





# INDONESIA EV REVOLUTION STARTS WITH BLUEBIRD TAXI

**Tesla Model X dan BYD e6 Resmi Jadi Taksi Listrik Blue Bird**

Febri Ardani, CNN Indonesia | Senin, 22/04/2019 15:30 WIB

- CNN

**Pertama di RI, Taksi Blue Bird Pakai Mobil Listrik Tesla**

- Okezone

**Armada Taksi Listrik Pertama di Indonesia**

- Kumparan

**Akhirnya, Taksi Mobil Listrik Beroperasi di Indonesia Mulai Mei**

- Kompas

**BREAKING NEWS: Bluebird Akan Luncurkan Taksi Listrik!**

- Otodriver

**Keren! Kini Bisa Pesan Taksi Listrik dari Bandara Soetta**

NEWS - Rehia Sebayang, CNBC Indonesia | 08 September 2019 20:40

- CNBC

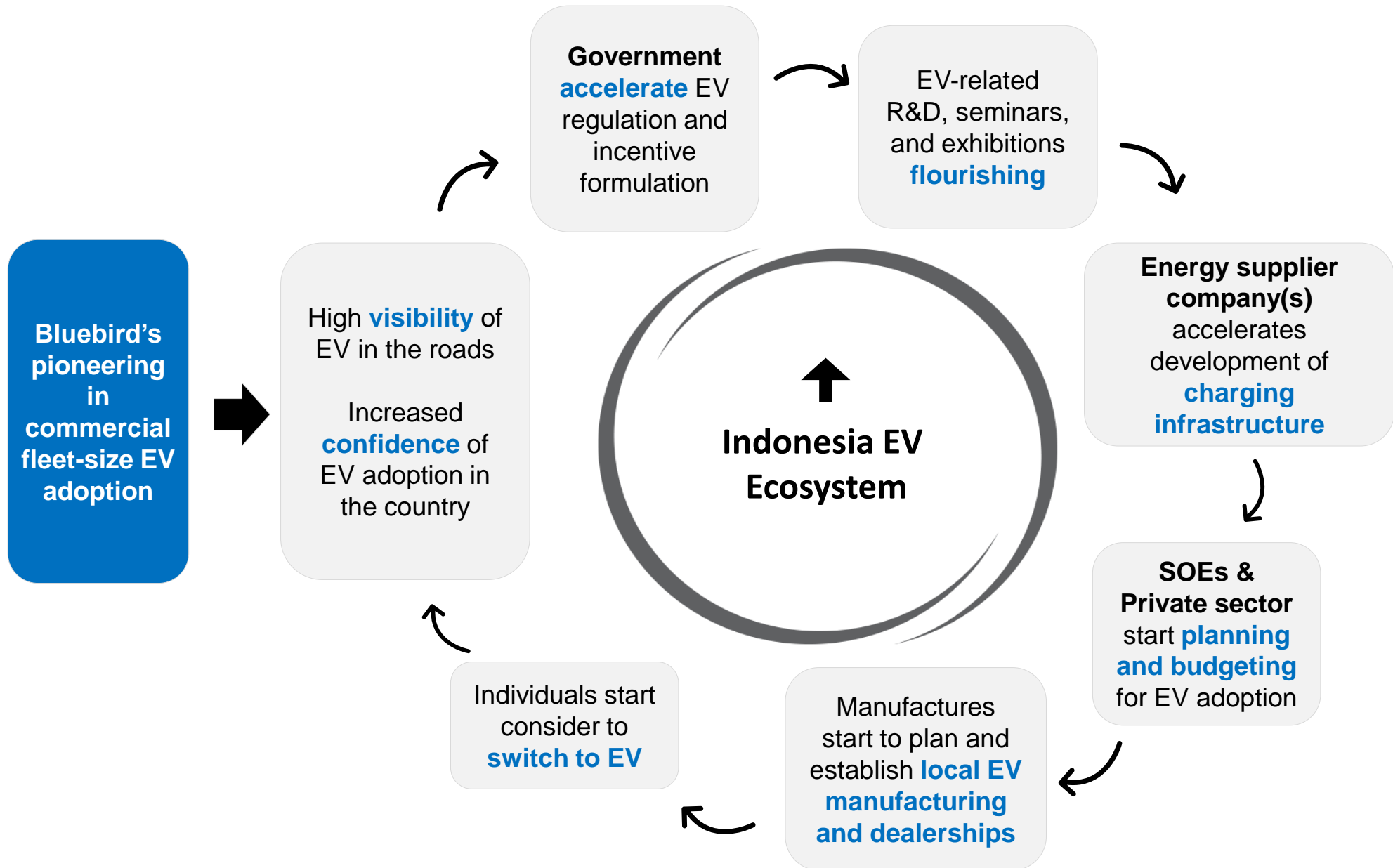
**Blue Bird Rilis Taksi Listrik Pertama**

- Republika

**Cara Pesan Taksi Listrik Blue Bird**

Tempo

# INDONESIA EV ECOSYSTEM BEGINS TO SNOWBALL FAST





# Bluebird's EV Operation

# CURRENT BLUEBIRD'S EV FLEET



SHENZHEN, CHINA



REYKJAVIK, ICELAND



LONDON, UK



ROTTERDAM, THE NETHERLANDS



CAMPINAS, BRAZIL



BOGOTA, COLOMBIA



BRUSSELS, BELGIUM



SINGAPORE

# CURRENT BLUEBIRD'S MAIN EV FLEET SPECIFICATION (BYD E6)

## Vehicle Spec



**BYD E6**



1822\*4560\*1630 (mm)



140 km/h



91 kWh



120 kWh (161 hp)



400 km



20.5 kWh/100 km

## Charger Spec



### 40 kW EV Charging

Type	Fast Charging
Current	AC
Dimensions	400*200*690 (mm)
Weight	28 kg
Rated Voltage	400V
Max Power	40 kW
Max Current	63A
IP Grade	IP55
Cable Length	3m
Plugs	1

## Connection Spec



Type 2 vehicle connector

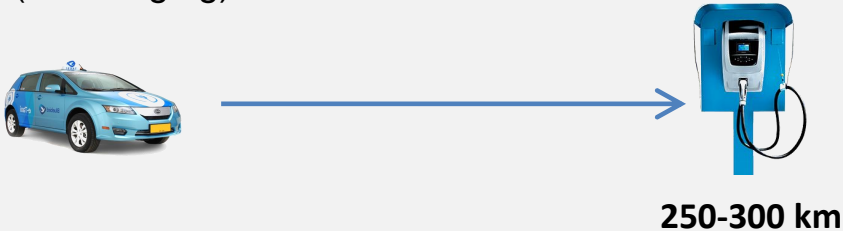


Type 2 vehicle inlet

# OPERATION & MAINTENANCE

## Operation

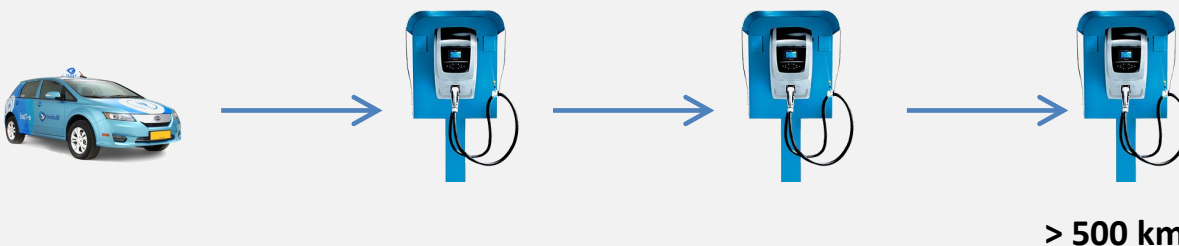
### Initial operation design (1x charging)



### Current operation development (longer operation distance, 2x charging)



### Future operation design (lower battery capacity, long distance, multiple charging)



## Maintenance

### Remains

- √ Car wash
- √ Body check & repair
- √ Air conditioning
- √ Tire pressure/change
- √ Brakes & suspensions

### Less frequent

- Coolant
- Battery check/replacement

### Not needed

- X Engine oil
- X Oil filter
- X Fuel filter
- X Spark plug
- X Timing belt
- X Tune-up
- X Engine air filter

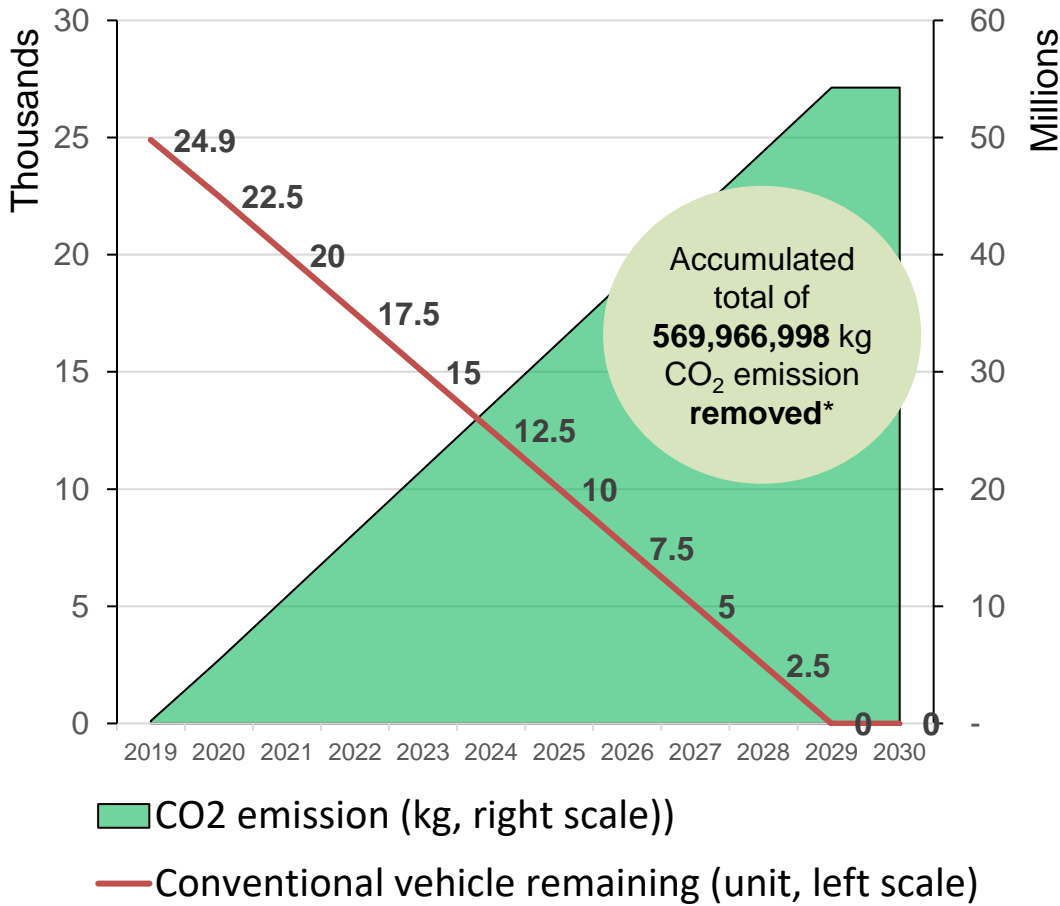


# Bluebird's Plan Ahead

B 1475 TTD

# OUR ASPIRATION IS HIGH

## 1 To accelerate our taxi fleet replacement with EV



## 2 To start adopting EV to our other commercial fleet



**Bluebird purchases 4,000 vehicles annually in average**  
**We plan to have some of this annual purchases switched to EV**

\*Calculated based on Indonesian Ministry of Environment's emission calculation methodology (2012)

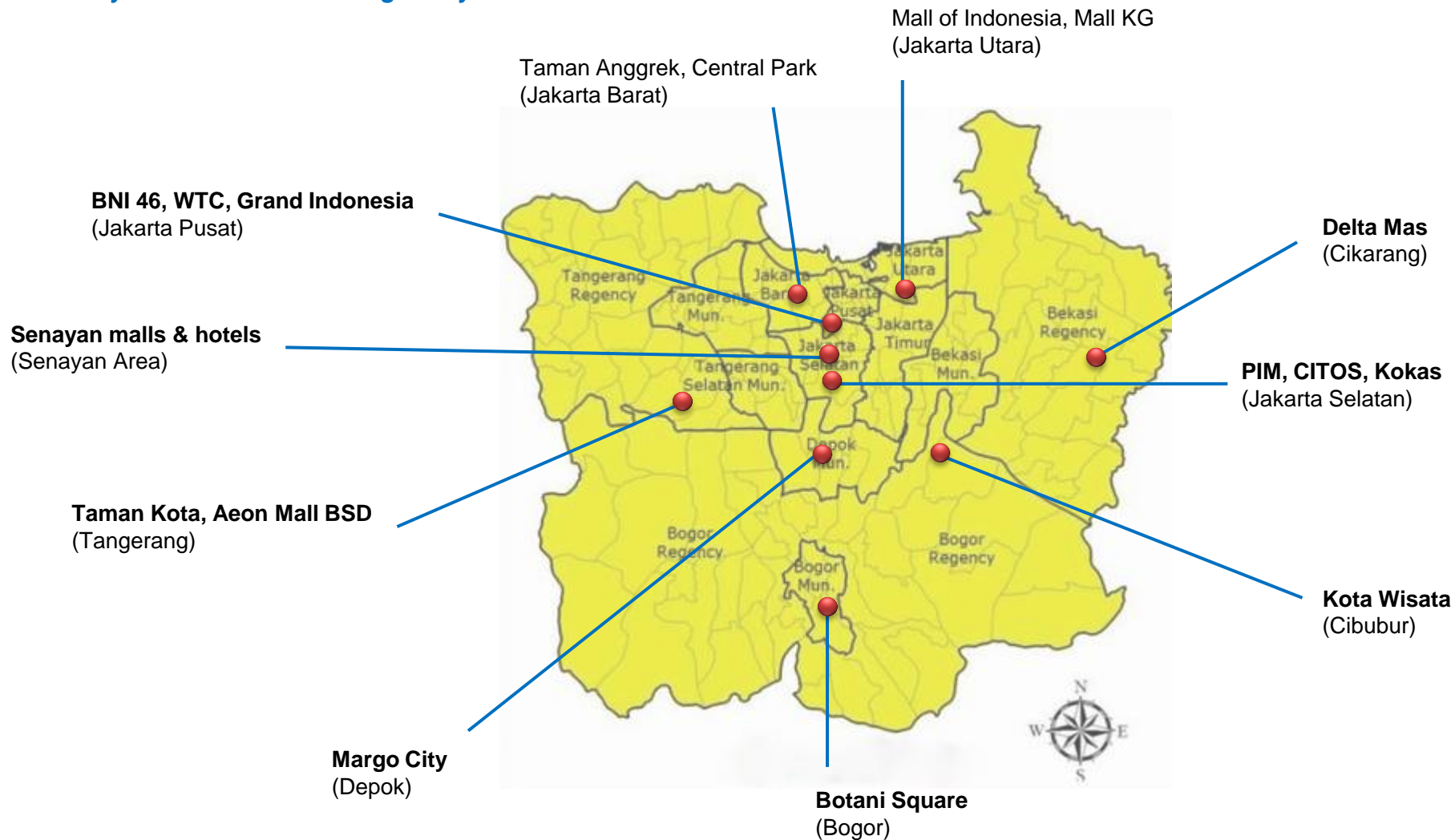


# PROJECTED NEED FOR CHARGING STATIONS IN GREATER JAKARTA

**Area** : 7,604 km<sup>2</sup>

**Population** : >30 million

*Will surpass Tokyo as World's #1 Mega City in 2030*



The background image shows an electric vehicle charging station. A person is standing next to a white car, which is plugged into a charging station. The station has a screen and a charging cable. The text "e-Taxi" and "PLI" are visible on the station. The entire image is overlaid with a blue semi-transparent filter.

# Supports needed

# Bluebird EV Charging Station



# Bluebird EV Charging Station



# Our EV Ecosystem Homeworks for Higher EV Adoption

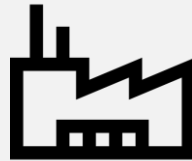
1

**MANUFACTURER  
SUPPORT**



2

**LOCAL  
MANUFACTURING**



3

**BATTERY  
DISPOSAL**



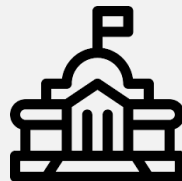
4

**PUBLIC CHARGING  
INFRASTRUCTURE**



5

**GOVERNMENT  
INCENTIVES**

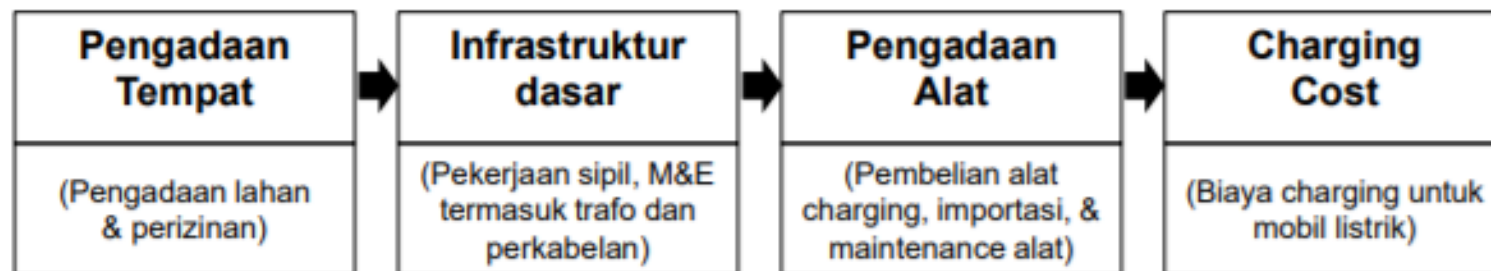


6

**USED-VEHICLE  
MARKET**



# Beberapa Opsi Skema Dukungan Pemerintah untuk **Charging Station**



	Pengadaan Tempat	Infrastruktur dasar	Pengadaan Alat	Charging Cost	
<b>Opsi 1</b>	Full support	Full support	Full support	Full support	Dukungan penuh
<b>Opsi 2</b>	Full support	Full support	Partial support	Full support	Dukungan charging station
<b>Opsi 3</b>	Full support	Partial support	Full support	Full support	Dukungan infrastruktur
<b>Opsi 4</b>	Full support	Full support	Full support	Full support	Dukungan lahan
<b>Opsi 5</b>	Bantuan Pemerintah khusus untuk airport & special venue saja	Bantuan Pemerintah untuk trafo dan perkabelan saja	Insentif pemerintah dalam pengadaan alat oleh operator	Subsidi pemakaian listrik per kWh untuk operator	Rekomendasi kami

- Sepenuhnya oleh Pemerintah / Kementerian ESDM
- Sepenuhnya oleh Operator / Blue Bird
- Dukungan parsial dari Pemerintah per kategori

# Thank you



IoT enabled



Eco-friendly



Multi-channel reservation



Multi-mode payment