

# BOI Investment Policy on EVs



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# Agenda



**Introduction to BOI**

**Overview of the Thai Automotive Industry**

**Government Policy and BOI Incentives on EV**

# Introduction to Thailand Board Of Investment

## About BOI



**Information and advice** on establishing operations in Thailand



**Coordinate** between the foreign business community and other public agencies



**Business Support Services for Investors:** incentives, sourcing, and SMEs' competitiveness development

## OVERSEAS OFFICES



## BOI Investment Promotion Measures



**Policy**

- 100% foreign ownership
- No local content requirements
- No export requirements
- No restriction on foreign currency



**Tax Incentives**



**Non-tax Incentives**

- Land ownership
- Work permit & visa facilitation

- Exemption of import duties on machinery
- Exemption of import duties on raw or essential materials imported for export
- Exemption of import duties on goods imported for R&D
- Corporate income tax (CIT) exemption
- 50% CIT reduction

# BOI Investment Incentive Scheme

## Standard Incentives



### Activity-based Incentives

- Bio and Medical Industries
- Advanced Manufacturing Industries
- Basic and Supporting Industries
- Digital, Creative Industries, and High Value Services

≤ 8 YEARS CIT EXEMPTION

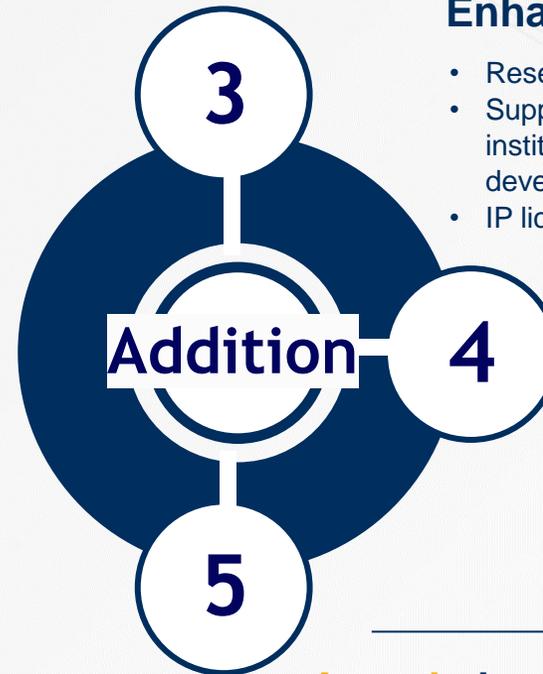
### Technology-based Incentives

- Biotechnology
- Nanotechnology
- Advanced Material Technology
- Digital Technology

10 YEARS CIT EXEMPTION



## Additional Incentives



### Merit-based Incentives for Competitiveness Enhancement

- Research & Development (R&D)
- Support academic / research institutes, or technology and HR development fund
- IP licensing fee
- Advanced technology training
- Development of local suppliers
- Product and packaging design
- Donations to technology & human resource development funds

### Area-based Incentives

- EEC 3 provinces
- SEZ 10 provinces
- Southern border provinces
- 20 provinces with lowest income
- Industrial Estates/Zones
- Science and Technology Parks
- (TSP, Food Innopolis, Space Krenovation Park)

### Agenda-based Incentives

- Investment promotion measures for companies listed in the Stock Exchange Of Thailand (SET) and the Market for Alternative Investment (MAI)
- Efficiency enhancement measure
- Measures to Support Grassroot Economy Development

# Thailand: At the Crossroads of ASEAN



“

## Strategic Location, Gateway to ASEAN

”

“We are surrounded by  
the world’s economic powerhouses”



≈8% of the world’s population

ASEAN’s population  
within 3,000 km



Regional Comprehensive Economic Partnership (RCEP) is a proposed agreement between ASEAN and its free trade agreement (FTA) partners

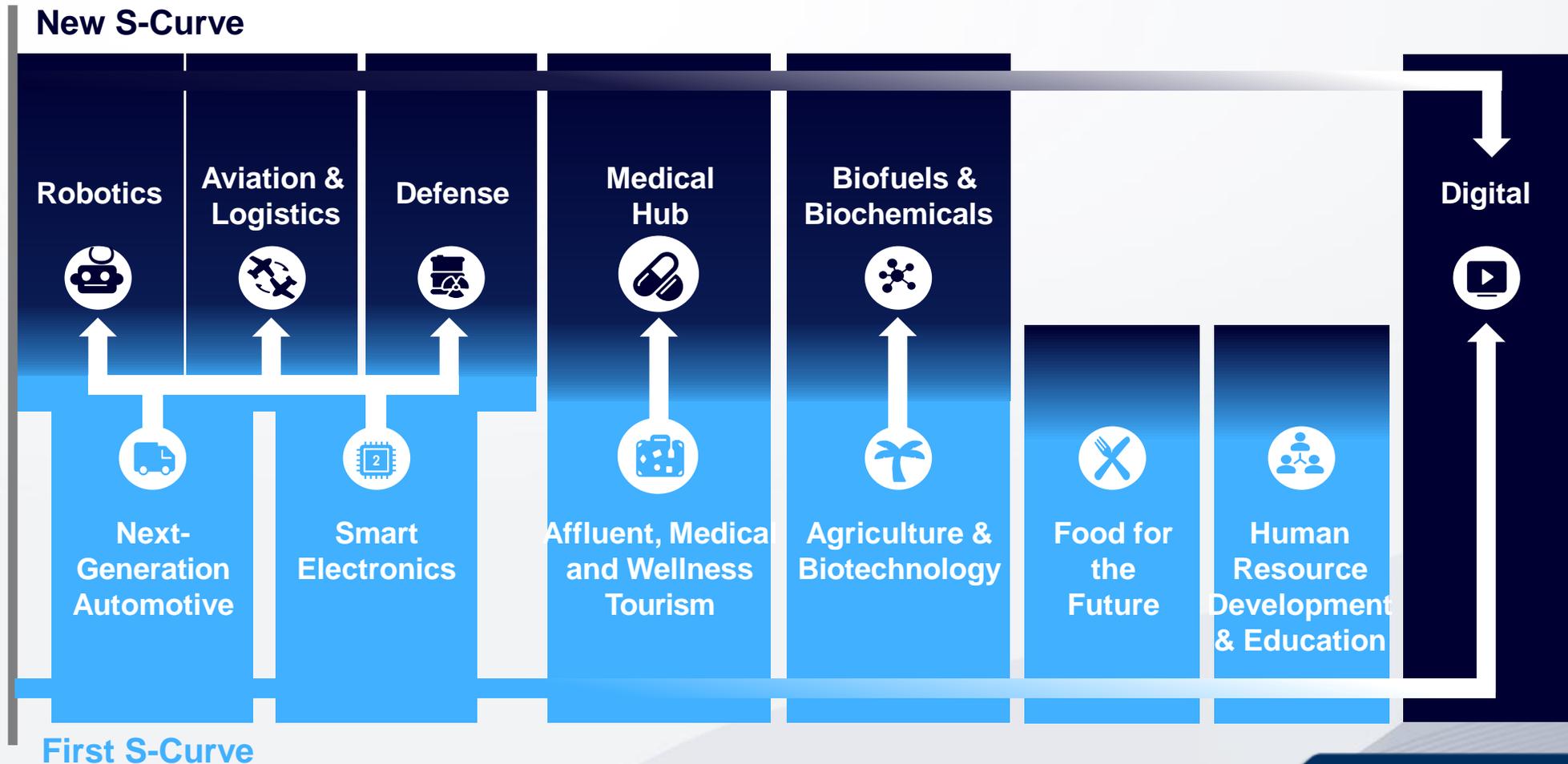
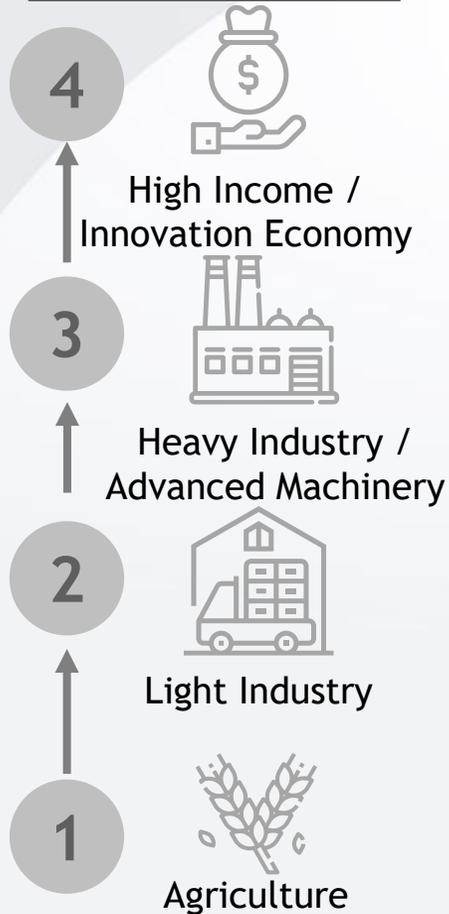


# Thailand 4.0: Towards an Innovation-Led Economy

To be a Developed Economy within 20 Years with GDP per capita of USD 15,000 and annual growth of 5-6%

## Thailand 4.0

## 12 Targeted S-curve Industries



# Agenda

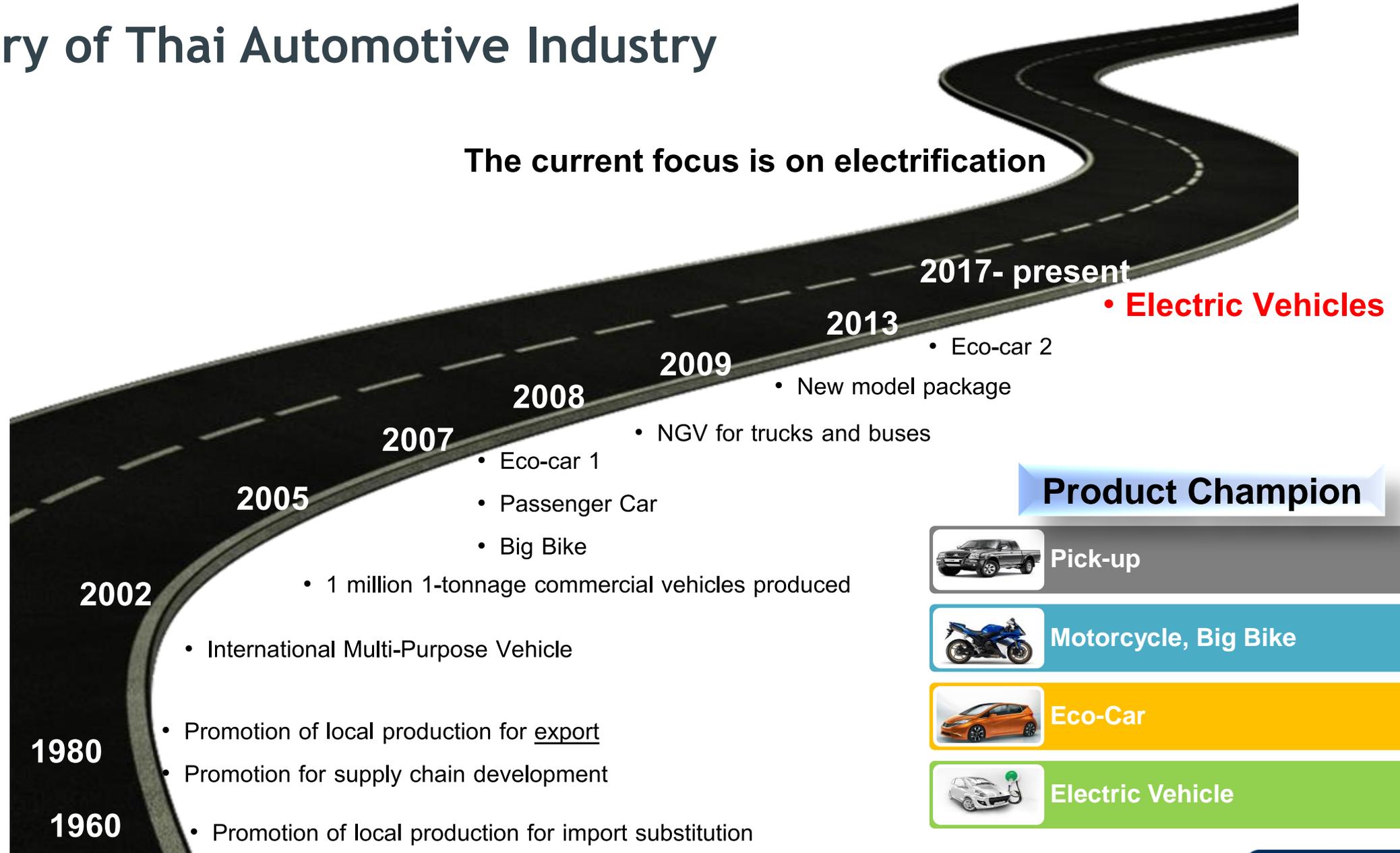
**Introduction to BOI**

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# History of Thai Automotive Industry

The current focus is on electrification



## Product Champion



Pick-up



Motorcycle, Big Bike



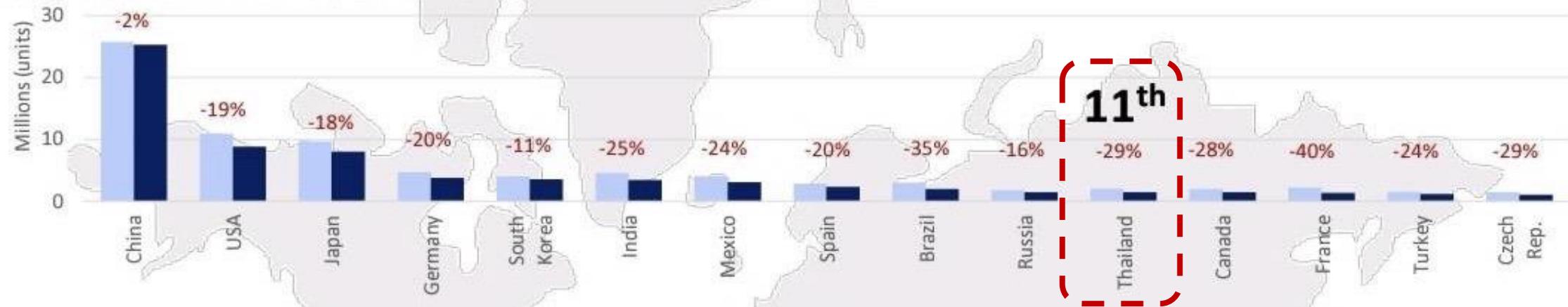
Eco-Car



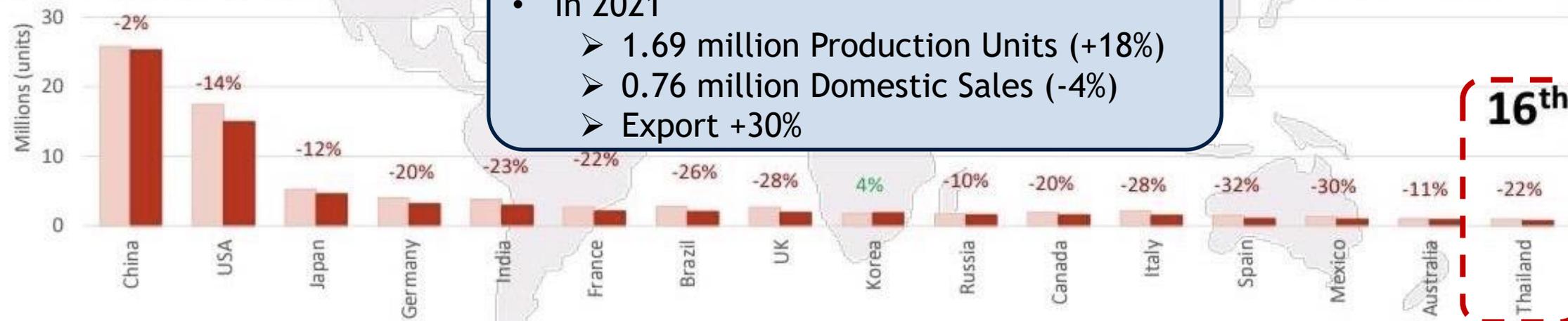
Electric Vehicle

# Global Motor Vehicle (Car) Situations

## MOTOR VEHICLE PRODUCTION RANKING

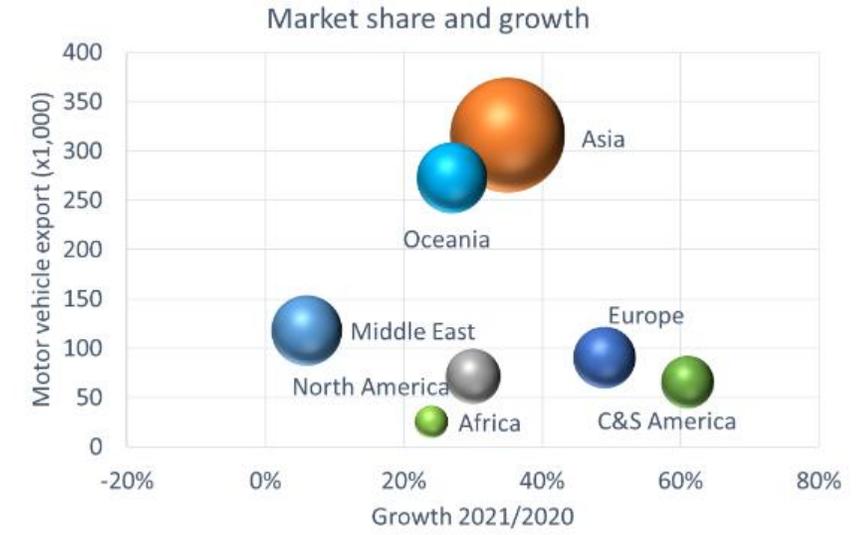
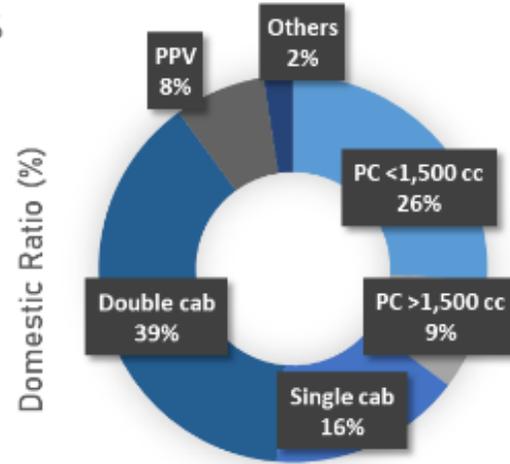
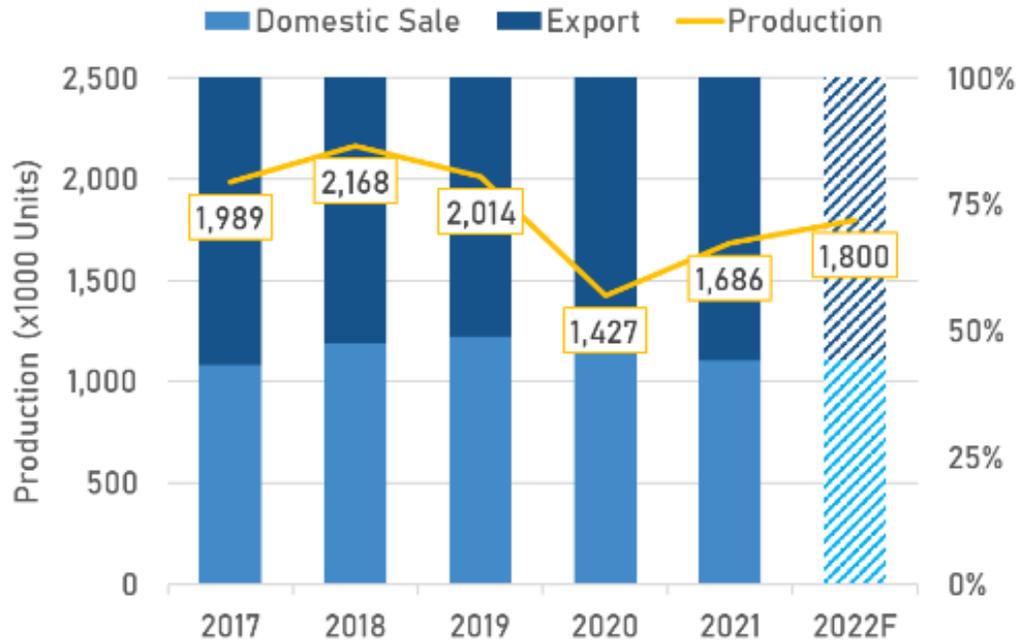


## MOTOR VEHICLE SALES RANKING

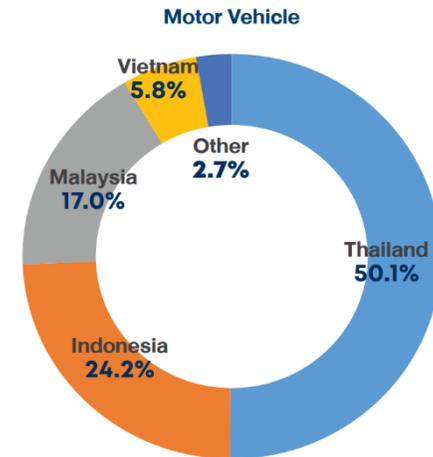


- 3 million Production Capacity
- In 2021
  - 1.69 million Production Units (+18%)
  - 0.76 million Domestic Sales (-4%)
  - Export +30%

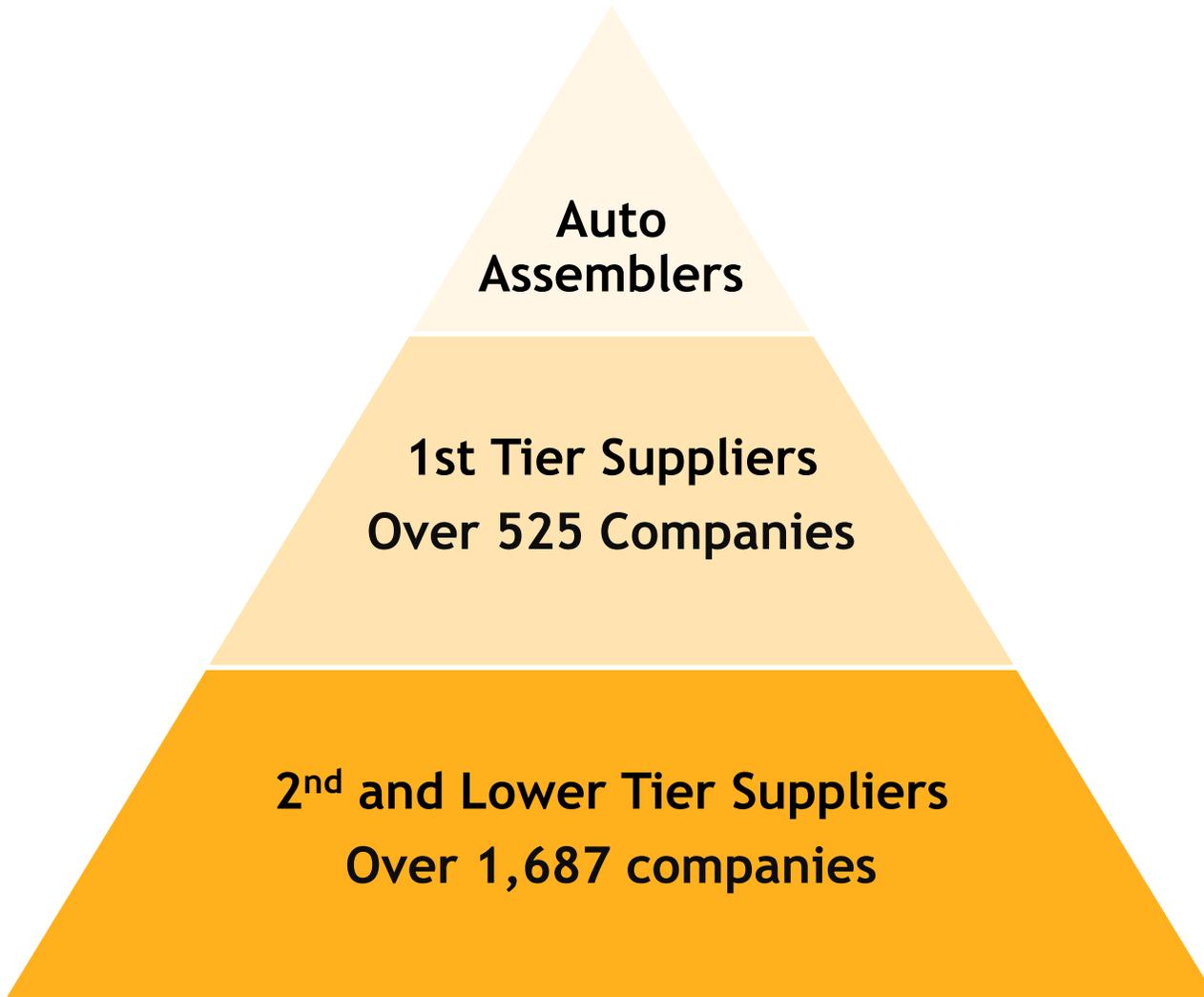
# Production Statistics



Thailand is ASEAN's largest auto producer, which accounted for 50.1 percent of total production in all ASEAN countries (2020).



# Thai Automotive Industry Structure



## 21 Car and 12 Motorcycle Makers



## Foreign operators owning approximately 65%

Engine, Drivetrains, Steering, Suspensions, Brake, Wheels, Tires, Bodyworks, Interiors, Electronics and Electric Systems

## Thai operators owning approximately 70%

Stamping, Plastic, Rubber, Machining, Casting, Forging, Trimming and Electrical Parts

# Motor Vehicle Factory Locations

## 21 MOTOR VEHICLE ASSEMBLER AND 5 R&D CENTER

### AYUTTHAYA

 HONDA AUTOMOBILE (THAILAND) CO., LTD.

### BANGKOK

 TAN CHONG SUBARU AUTOMOTIVE (THAILAND) CO.,LTD  
FOTON CP MOTOR CO., LTD.

 HONDA R&D ASIA PACIFIC CO., LTD.  
MINE MOBILITY RESEARCH CO., LTD.

### SAMUTPRAKARN

 NISSAN MOTOR (THAILAND) CO., LTD.  
MERCDES-BENZ MANUFACTURING (THAILAND) CO., LTD.  
TOYOTA MOTOR THAILAND CO.,LTD.  
TOYOTA AUTO WORKS CO.,LTD.  
ISUZU MOTORS COMPANY (THAILAND) LTD.  
HINO MOTORS MANUFACTURING (THAILAND) LTD.  
SCANIA (THAILAND) CO.,LTD.  
THAI-SWEDISH ASSEMBLY CO., LTD.

 NISSAN MOTOR ASIA PACIFIC CO., LTD.  
TOYOTA DAIHATSU ENGINEERING & MANUFACTURING CO., LTD.  
ISUZU TECHNICAL CENTER OF ASIA CO., LTD.

### PRACHINBURI

 HONDA AUTOMOBILE (THAILAND) CO., LTD.

### CHACHOENGSAO

 TOYOTA MOTOR THAILAND CO.,LTD.  
HINO MOTORS MANUFACTURING (THAILAND) LTD.  
MINE MOBILY (THAILAND) CO., LTD.

### CHONBURI

 MITSUBISHI MOTORS (THAILAND) CO., LTD.  
FOMM (ASIA) CO., LTD.  
TAKANO AUTO (THAILAND) CO., LTD.

### RAYONG

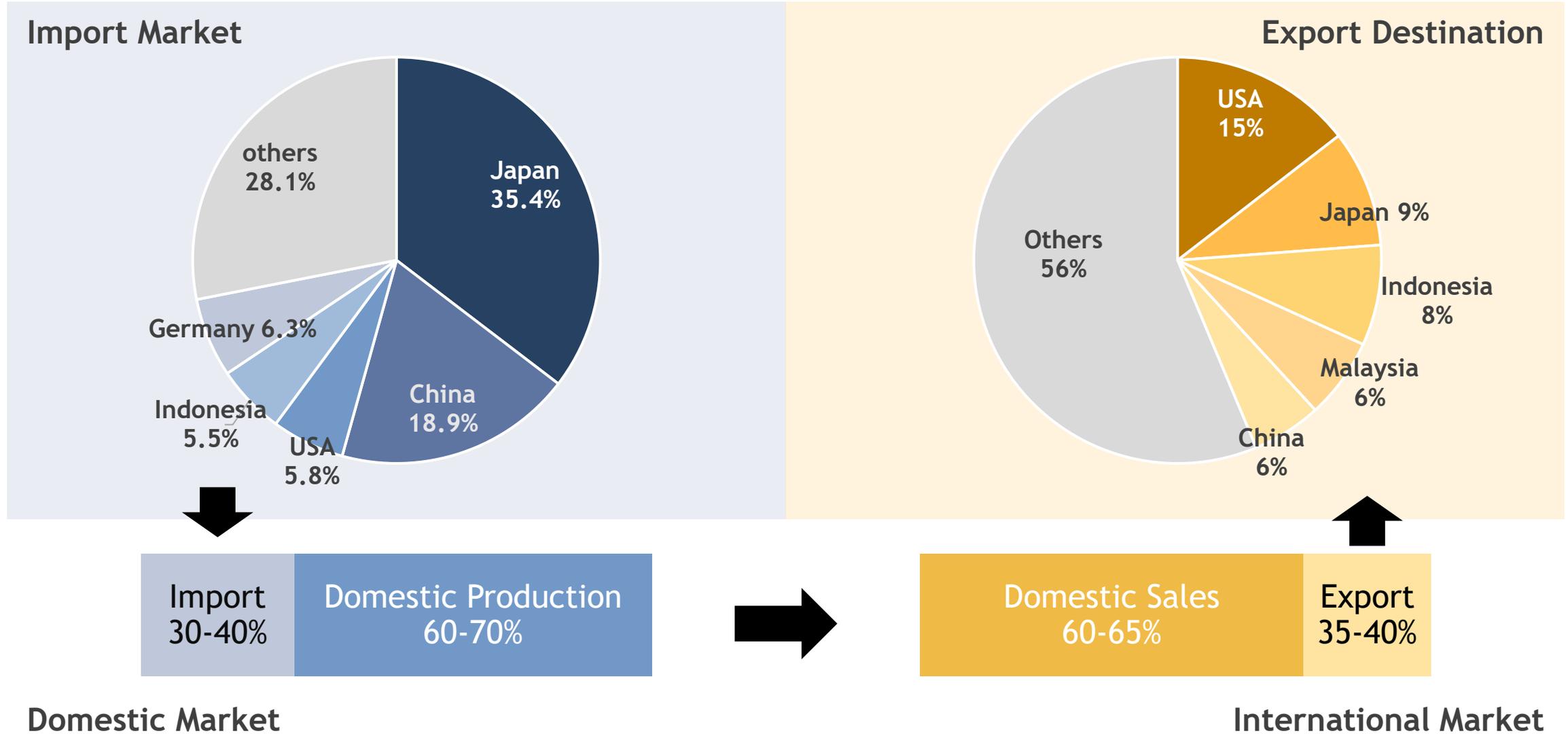
 AUTOALLIANCE (THAILAND) CO., LTD.  
BMW MANUFACTURING (THAILAND) CO., LTD.  
FORD MOTOR COMPANY (THAILAND) LIMITED  
GREAT WALL MOTOR MANUFACTURING (THAILAND) CO., LTD.  
SAIC MOTOR - CP CO., LTD.  
SUZUKI MOTOR (THAILAND) CO., LTD.

 ASSEMBLY PLANT

 R&D CENTER

Note: \* GM ended production and sold factory to Great Wall Motors in Feb 2020  
Collected by Thailand Automotive Institute (2020)

# Most of auto parts used for Thailand's manufacturing are produced locally



# Agenda

**Introduction to BOI**

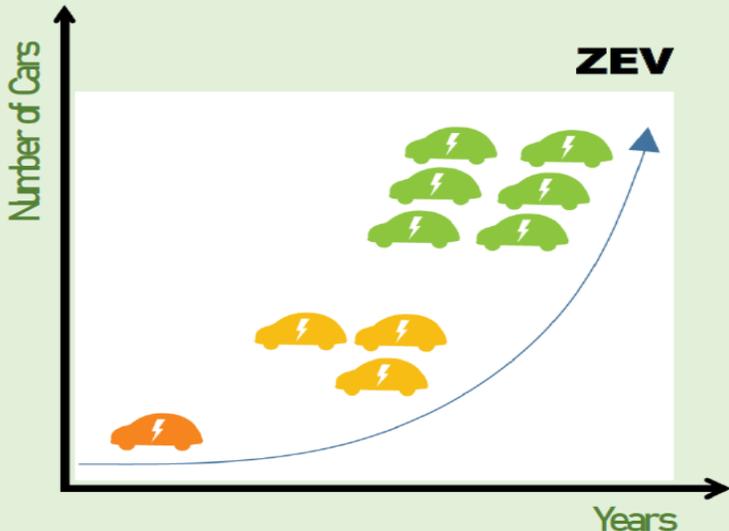
**Overview of the Thai Automotive Industry**

**Government Policy and BOI Incentives on EV**

# Target of “ZEV” Production and Usage in Thailand

**Target 30 @ 30**

Year 2030  
30% of the Car Production  
in Thailand is “ZEV”



Target	Classification	Volume of ZEV (Year)	
		2025	2030
Usage 	Passenger car/Pickup car	225,000 (30%)	440,000 (50%)
	Motorcycle	360,000 (20%)	650,000 (40%)
	Bus & truck	18,000 (20%)	33,000 (35%)
Production 	Passenger car/Pickup car	225,000 (10%)	725,000 (30%)
	Motorcycle	360,000 (20%)	675,000 (30%)
	Bus & truck	18,000 (35%)	34,000 (50%)

Source: The Plan of the National Electric Vehicle Policy Committee

# Thai Government Supports on EVs

## Institutional Infrastructure

### Environment:



- Department of Industrial Work to prepare EV battery end-of-life plan
- Pollution Control Department to enact Acts for EV battery end-of-life management

### Infrastructure:



- Ministry of Energy to subsidize Charging Station
- TISI to proceed on National Automotive and Tire Testing Facility



### Safety & Standards:



- TISI to proceed on standards of EV charging system, electromagnetic compatibility, battery for EV and DC meter for billing system charging Station

## Government Incentives

### BOI Package:



- HEV, PHEV, BEV
- BEV Platform
- Key Parts
- Charging Station

### HR Development:

- Skilled Labor

### Special Tax Rate:



- Special Excise Tax Rate
- Import Duty Exemption on imported BEV for BOI Promoted companies

## Market Stimulus

### Domestic Market Stimulation:



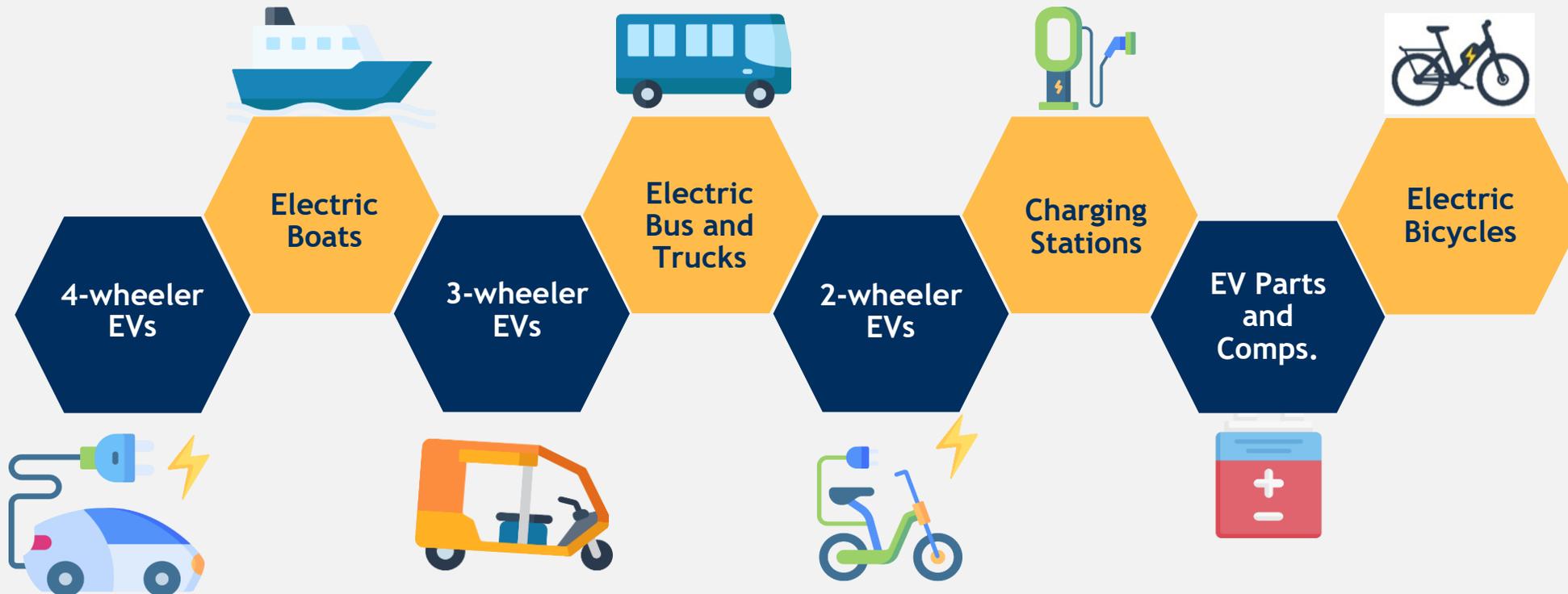
สำนักงานนโยบาย  
และแผนพลังงาน  
กระทรวงพลังงาน



- Target of 20% use of BEV in Public procurement
- AOT to use more PHEV, BEV
- IEAT, MOST to use BEV in EEC
- EPPO promotes Taxi Conversion to BEV
- Fine Arts Department to use BEV at large national heritage sites
- EV Stimulation Package by the Ministry of Finance (EV3)

# BOI Promotion on Battery Electric Vehicles (BEV)

BOI has revamped incentives to accelerate comprehensive investment in EVs ecosystem, focusing on **battery EVs** with an aim of developing the country as Asia's manufacture hub of EVs.



Including: **BEV "PLATFORM"** for Electric Car, Electric Tricycle and Electric Bus and Truck



Exemption  
CIT



Exemption of import  
duties on raw  
materials used in R&D



Exemption  
Import duties on  
machinery



Exemption  
Import duties  
on raw materials



Non-tax  
incentives

# Manufacture of Battery Electric Vehicles (BEVs), Plug-In Hybrid Electric Vehicles (PHEVs), Hybrid Electric Vehicles (HEVs) and BEV Platforms

## Conditions



CIT Exemption:  
Max. 13 years

### 4.24 Manufacture of Battery Electric Vehicles (BEVs), Plug-In Hybrid Electric Vehicles (PHEVs), Hybrid Electric Vehicles (HEVs) and BEV Platforms

1. Within 3 years after the date of promotion certificate issuance: manufacture of all categories of electric vehicles must be started, and electric battery must be started from module manufacture.
2. Within 3 years after the starting date of electric car manufacture: at least 1 out of 3 key parts (Traction Motor, DCU, BMS) must be additionally manufactured. Additionally, for HEV and PHEV, at least 2 parts in accordance with activity 4.8.3 must be manufactured.
3. In case of domestic sale, the products must receive stipulated standards, i.e. UN R100, R13H, R94/95, and Euro5 (only for HEV/PHEV).

Machinery importing time shall not be allowed to extend, except for justified reasons.

Total investment capital of not less than 5 billion baht.

HEV: **No CIT exemption**  
 PHEV: **3-year CIT exemption**  
 BEV: **8-year CIT exemption**  
 + 1 to 5-year exemption in case of R&D

No additional exemption in case situated in the industrial estate



Total investment capital of less than 5 billion baht

HEV: **No CIT exemption**  
 PHEV: **3-year exemption**  
 BEV: **3-year exemption**

- + 2-year exemption if manufacture starts in 2022.
- + 1-year exemption per part in case other key part is manufactured in addition to standard requirements.
- + 1-year exemption in case actual manufacture is >10,000 car/year in any year within 3 years (only for BEV)
- + 1 to 5-year exemption in case of R&D

No additional exemption in case situated in the industrial estate.



Exemption  
CIT



Exemption of import  
duties on raw  
materials used in R&D



Exemption  
Import duties on  
machinery



Exemption  
Import duties  
on raw materials



Non-tax  
incentives



# Manufacture of Battery Electric Motorcycles

## Conditions

CIT Exemption:  
Max. 13 years

### 4.25 Manufacture of Battery Electric Motorcycles

1. Must propose the plans in package.
2. Must manufacture battery electric motorcycles and electric batteries within 3 years the date of promotion certificate issuance. (Machinery importing time shall not be allowed to extend, except for justified reasons.)

In case of domestic sale, the products must receive stipulated standards, i.e. UN R136, UN R75 and UN R78.

## Incentive

### 3-year CIT exemption

- + 1-year exemption if the manufacture starts in 2022.
- + 1-year exemption if the battery manufacture starts from the module production process within 3 years as from the promotion certificate issuance date.
- + 1-year exemption per part in case other key part (BMS, Motor, or DCU) is additionally manufactured within 3 years as from the promotion certificate issuance date.
- + 1 to 5-year exemption in case of R&D

No additional exemption in case situated in the industrial estate



Exemption  
CIT



Exemption of import  
duties on raw  
materials used in R&D



Exemption  
Import duties on  
machinery



Exemption  
Import duties  
on raw materials



Non-tax  
incentives



# Manufacture of Battery Electric Bus & Truck and Platforms

## Conditions

CIT Exemption:  
Max. 12 years

### 4.27 Manufacture of Battery Electric Bus and Truck and Platforms

1. Must propose the plans in package.
2. Must manufacture battery electric bus or truck and electric battery within 3 years as from the date of promotion certificate issuance. (Machinery importing time shall not be allowed to extend, except for justified reasons.)

In case of domestic sale, the products must receive stipulated standards, i.e. UN R100.

## Incentive

### 3-year CIT exemption

- + 1-year exemption if battery manufacture starts from the module production process within 3 years as from the promotion certificate issuance date.
- + 1-year exemption per part in case other key part (BMS, Motor, or DCU) is additionally manufactured within 3 years as from the promotion certificate issuance date.
- + 1 to 5-year exemption in case of R&D.

No additional exemption in case situated in the industrial estate



Exemption  
CIT



Exemption of import  
duties on raw  
materials used in R&D



Exemption  
Import duties on  
machinery



Exemption  
Import duties  
on raw materials



Non-tax  
incentives

# Key Parts of Electric Vehicles including Lithium-ion Battery

## 17 Key Parts for EVs

- Air Conditioning System
- DCDC converter
- Front / Rear Axle for EV bus
- Electrical Circuit Breaker
- EV Charging Equipment
- Smart Charging System
- On-board Charger
- Traction Motor
- Portable EV Charger
- Inverter
- BMS
- DCU
- Battery\*
- High Voltage Harness
- Reduction Gear
- Battery Cooling System
- Regenerative Braking System

Incentive

**8-year CIT exemption**

## Battery\*



### Pack Assembly - CIT 5 years

### Module Production - CIT 8 years

+ Incentive of 90% import duty reduction for raw and essential materials not available within the country for 2 years

### Cell Production - CIT 8 years (No cap)

+ Incentive of 90% import duty reduction for raw and essential materials not available within the country for 2 years



Exemption  
CIT



Exemption of import  
duties on raw  
materials used in R&D



Exemption  
Import duties on  
machinery



Exemption  
Import duties  
on raw materials



Non-tax  
incentives

# Charging Station

## Incentive

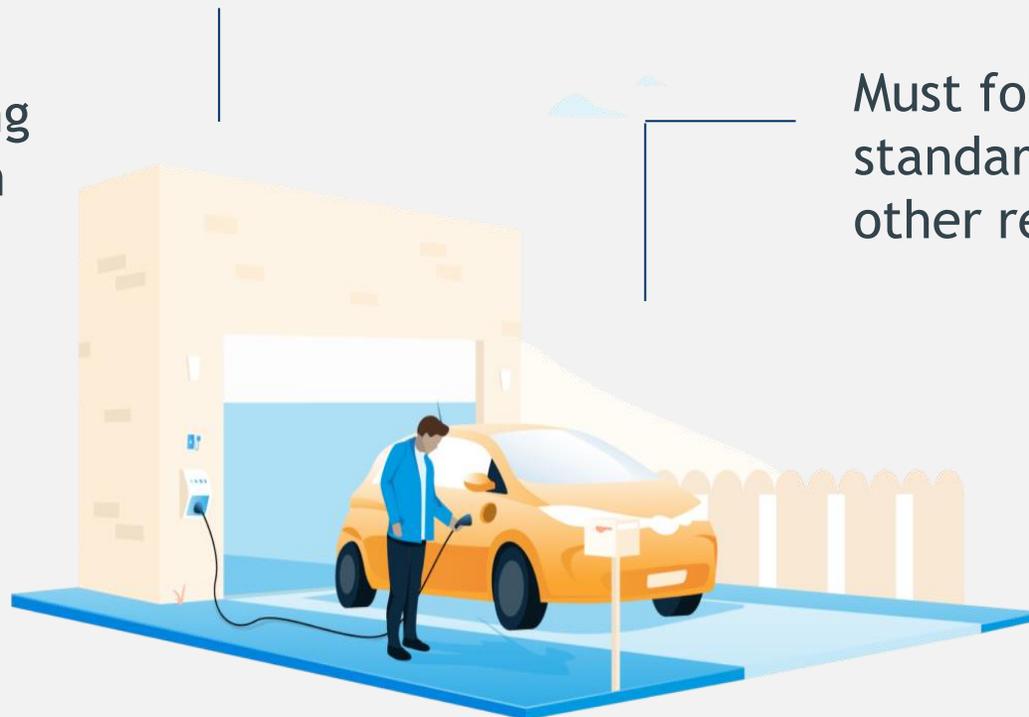
- **5-year CIT exemption** for at least 40 chargers, 25% of which are fast chargers
- **3-year CIT exemption** for other cases

## Conditions

Propose EV Smart Charging System Development plan or plan for connecting to the “Central EV Charging Network Platform”

Propose procurement plan for parts and equipment

Must follow safety standards and rules of other relevant agencies



Exemption  
CIT



Exemption of import  
duties on raw  
materials used in R&D



Exemption  
Import duties on  
machinery



Exemption  
Import duties  
on raw materials



Non-tax  
incentives



# Promoted Projects on Electric Vehicles

(source: BOI Information Database (BIS) as of 30<sup>th</sup> April 2022)

666,855 units

**31**  
Projects \*  
**1,677.4**  
Million USD\*\*

Promoted  
Projects

**31**

Certificate  
Issuance  
(Projects)

**15**

Commercialized  
Distribution

**11**

HEV  
(438,455)

7

1,078.4



PHEV  
(92,600)

7

224.6



BEV  
(131,200)

14

305.0



Battery  
Electric Bus  
(4,600)

3

69.4



Think Resilience

THINK THAILAND

Remarks: \* 17 Promoted Entities

\*\* Investment Values excluding Cost of Land and Working Capital / 34.5 B = 1 USD (05/22)



# Promoted Projects on Electric Vehicles' Parts & Components

(source: BOI Information Database (BIS) as of 30<sup>th</sup> April 2022)

**29**  
Projects \*

**444.0**  
Million USD \*\*\*\*

Promoted Entities

Battery

**18 \*\***

**339.0**



Traction Motor,  
Inverter, On-board Charger,  
DC/DC Converters, BMS and DCU

**4 \*\*\***

**79.0**



Air Conditioning System,  
EV Charging Devices, High Voltage  
Harness, Battery Cooling System

**7**

**26.0**



Noted: \*

\*\* 21 Promoted Entities,

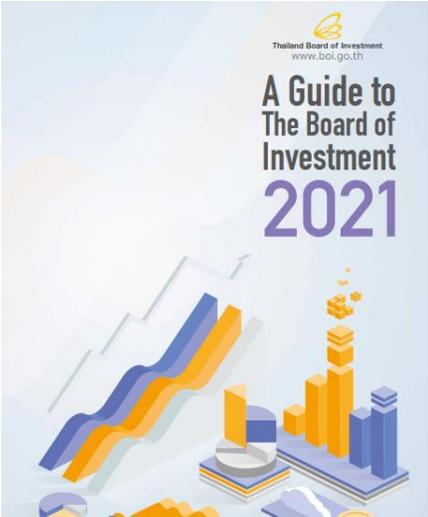
\*\* 12 Promoted Entities, 3 are promoted under activity 5.2.6.1 (High Density Battery)

\*\*\* In 1 project of “DELTA”, Traction Motor, Inverter, On-board Charger, DC/DC Converters, BMS and DCU are manufactured.

\*\*\*\* Investment Values excluding Cost of Land and Working Capital / 34.5 B = 1 USD (05/22)

# Learn more about the BOI

## A Guide to BOI



## Other guidebooks



## THAILAND BOARD OF INVESTMENT

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**For More  
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