

# 2023 CEO INVESTOR DAY

HYUNDAI MOTOR COMPANY

2023  
CEO INVESTOR DAY

# INTRODUCTION





# Progress for Humanity





# Future Mobility



LUXURY



HIGH  
PERFORMANCE



ELECTRIFICATION

IONIQ





2 0 2 3  
**CEO INVESTOR DAY**

01

Financial  
Strategy

02

Electrification  
Strategy

03

Mid- to Long-term  
Future Business Strategy

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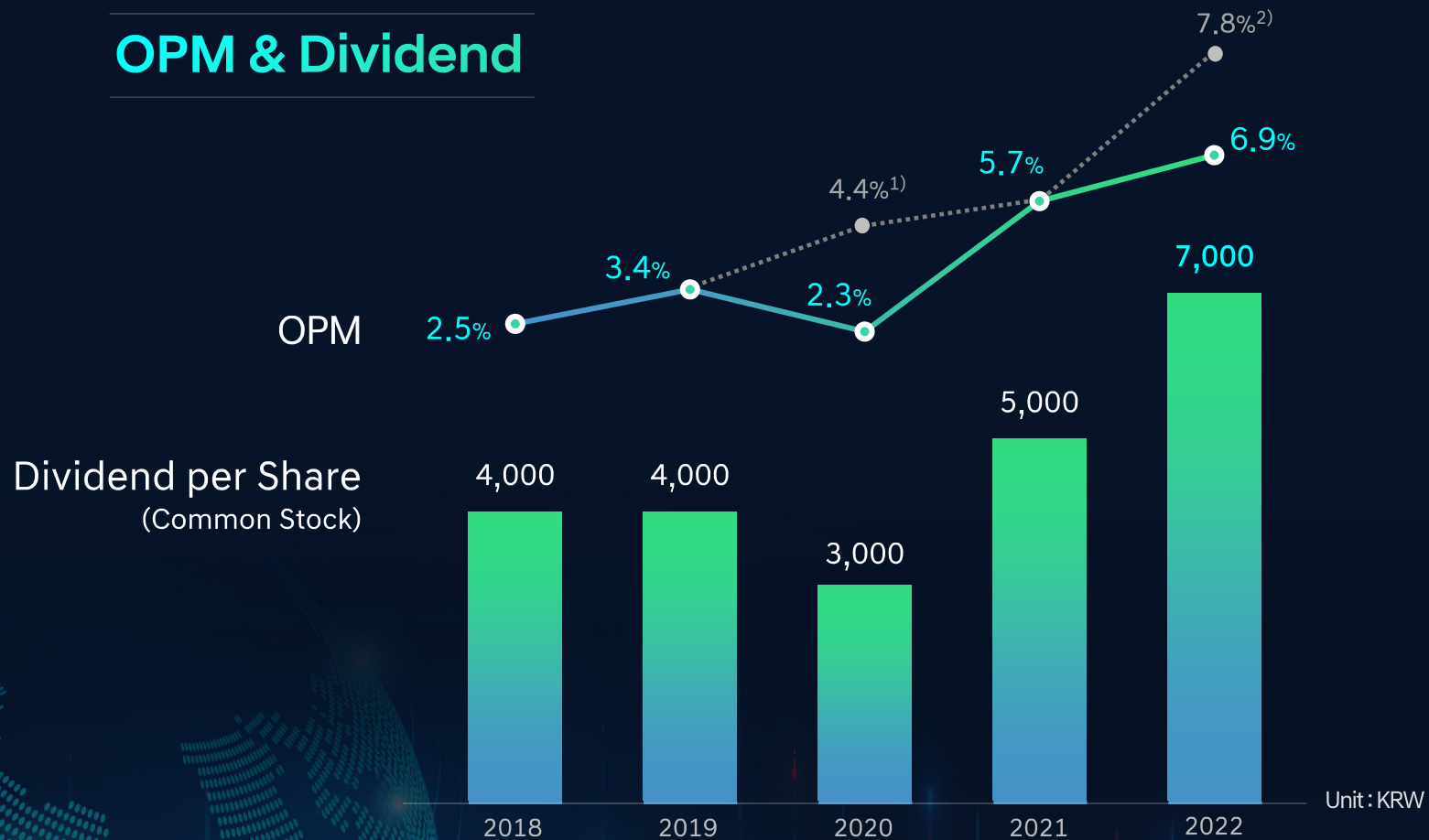
# FINANCIAL

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# Key Financial Status

Expand Shareholder returns through increased dividend derived from stabilized profits and continuous investments to enhance business competitiveness

## OPM & Dividend



<sup>1)</sup> Without warranty cost 2.1 trillion KRW

<sup>2)</sup> Without warranty cost 1.36 trillion KRW



# Shareholder Return Policy

Enhance shareholder value by announcing three-year shareholder return policies, including transparent dividend policy and implementation of quarterly dividend & treasury stock cancellation

## Dividend Policy

- Quarterly dividend



- Payout ratio 25% or above

based on annual consolidated controlling interests

To provide visibility and stability of dividend outlook



## Cancellation of Treasury Stock

- Cancel 1% of existing treasury stock\* per year for the next three years

To enhance shareholder value and strengthen trust through proactive policy

\* Outstanding treasury stock (based on common shares) as of March 2023 is 4.1%

# Mid- to Long-term Investment Plan

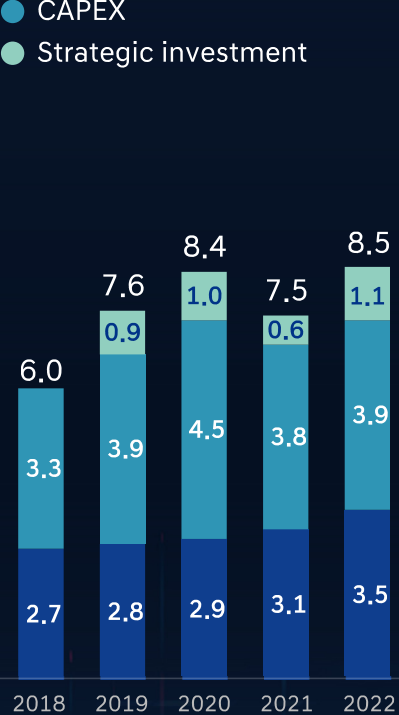
Invest KRW 35.8 trillion in electrification out of the KRW 109 trillion total 10-year plan

Investment for Electrification  
**35.8**

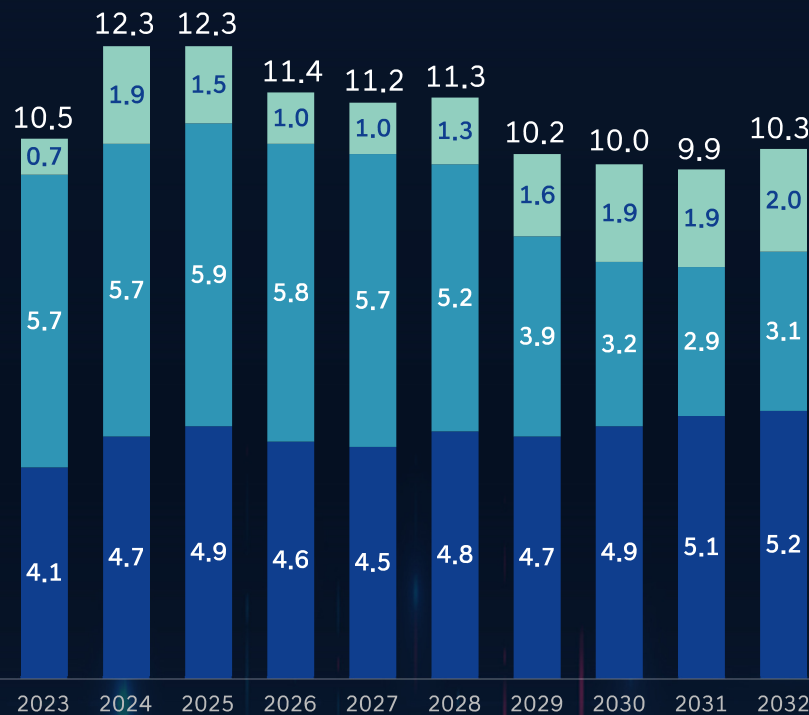
- New EV factory construction, Battery JV, Strategic investments (e.g. securing raw materials)
- R&D expenses, Infrastructures (e.g. charging stations)

## 2018 ~ 2022

- R&D
- CAPEX
- Strategic investment

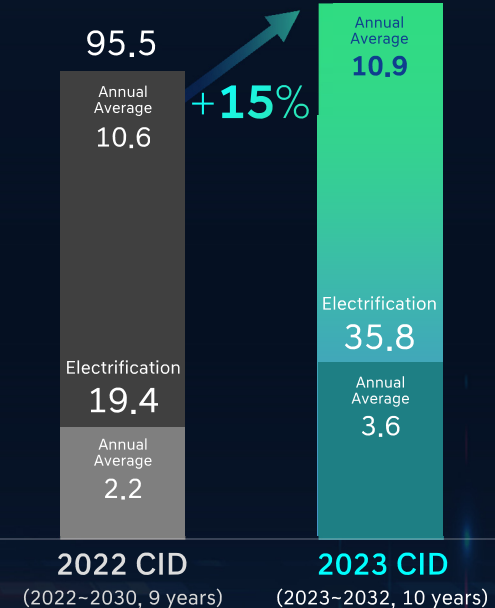


## 10-year Investment Plan



**109.4**

R&D 47.4  
Capex 47.1  
Strategic Investment 14.9



# Mid- to Long-term Capital Management

Promote efficient management of capital, balancing between investment and shareholder return with 3 phases



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# MODULAR ARCHITECTURE

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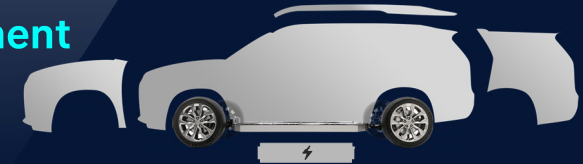
# Integrated Modular Architecture(IMA)

Cost savings through the development and launch of modular architecture

## Platform-oriented development



## Modular architecture development



Development method

Developing vehicles based on 23 pre-developed platform parts for each segment

Developing vehicles based on 86 pre-developed common modular systems regardless of segment and platform

Cost reduction effects

Cost reduction by creating a common area within the same platform

Expansion of cost reduction effect by sharing modular systems between platforms regardless of segment  
(Targeting cost reduction of 20%+, assuming based on a same model)

EV-dedicated Platform

**E-GMP**

2021 IONIQ 5	2021 Kia	2021 GV 60	2022 IONIQ 6	2023 Kia	2024 IONIQ 7	6 models
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**Next-generation EV-dedicated platform developed by inheriting E-GMP**

Hyundai 4	Genesis 5	Kia 4	13 models (2025~2030, Passenger EV only)
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# 2nd generation EV-dedicated Platform

Maximize modular architecture efficiency through the introduction of a 2nd generation EV-dedicated platform

## E-GMP (1<sup>st</sup> generation)

## 2<sup>nd</sup> generation EV-dedicated platform

<b>Coverage</b>	<ul style="list-style-type: none"> <li>• Focusing mostly with Mid-size SUV line up</li> </ul>	<ul style="list-style-type: none"> <li>• Expanding to Small-Extra Large size, Pick-up truck, Genesis</li> </ul>
<b>PE System</b>	<ul style="list-style-type: none"> <li>• <b>[Battery]</b> Lithium-ion battery</li> <li>• <b>[Motor]</b> High-efficiency motor system</li> </ul>	<ul style="list-style-type: none"> <li>• <b>[Battery]</b> Diversifying Battery solution (Adding LFP battery option, and developing technology considering diversification of form factor)                             <ul style="list-style-type: none"> <li>- Increase in AER through improved cell energy density</li> <li>- Expansion of battery capacity &amp; Application of charging/discharging technology using power bank</li> </ul> </li> <li>• <b>[Motor]</b> High efficiency/high power motor system</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>• <b>[Collision]</b> Highest collision safety performance in all regions (IIHS, EURO NCAP, K-NCAP)</li> <li>• <b>[Fire]</b> Pre-diagnosis of abnormal battery signs (delaying thermal runaway)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>[Collision]</b> Highest collision safety performance in all regions</li> <li>• <b>[Fire]</b> AI based real-time diagnosis for battery safety (+blocking thermal runaway)</li> </ul>
<b>SDV</b>	<ul style="list-style-type: none"> <li>• Application of self-developed OS</li> <li>• Autonomous driving/parking (LV3, RSPA2)</li> </ul>	<ul style="list-style-type: none"> <li>• Service expansion through open OS application</li> <li>• Advanced autonomous driving/parking (LV3+, RSPA3)</li> </ul>
<b>Space</b>	<ul style="list-style-type: none"> <li>• Increased space and convenience through EV-dedicated platform</li> <li>• Flat floor, slim cockpit, 2nd row swivel seat</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of customer experience through maximizing interior space and convenience</li> <li>• Flat floor, 1<sup>st</sup>/2<sup>nd</sup> row swivel seat, pop-up display</li> </ul>

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# PRODUCTION

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# Production Method

Reduction of investment in production facilities through ICE-EV mixed-model production lines, while securing profitability and responding to market demand through ICE parallel production

## Mixed-model production lines [IONIQ 5 / IONIQ 6<sup>1)</sup>]

## Dedicated Plant [HMGMA]

Period of securing  
production facilities

**Shutdown 20~30days**  
Using summer break and weekends/ public holidays

**Within 2 years**

Investment cost

**Approx. KRW 50 - 100 billion**

**Approx. KRW 2 trillion**

Secured production

**Max 150 thousand units each<sup>2)</sup>**

**300 thousand units**

Production efficiency

ICE parallel production on the same line

Secure profitability and  
Respond to market demand

Application of new tech/process of  
HMGICs (75% or more)

- Higher logistics automation rate (30% or higher, compared to HMMA)
- Assembly automation rate (150% or higher)
- Expand the number of models on production line (40% or more)
- Shorten the period for new vehicles (40% or more)
- Propel carbon neutral

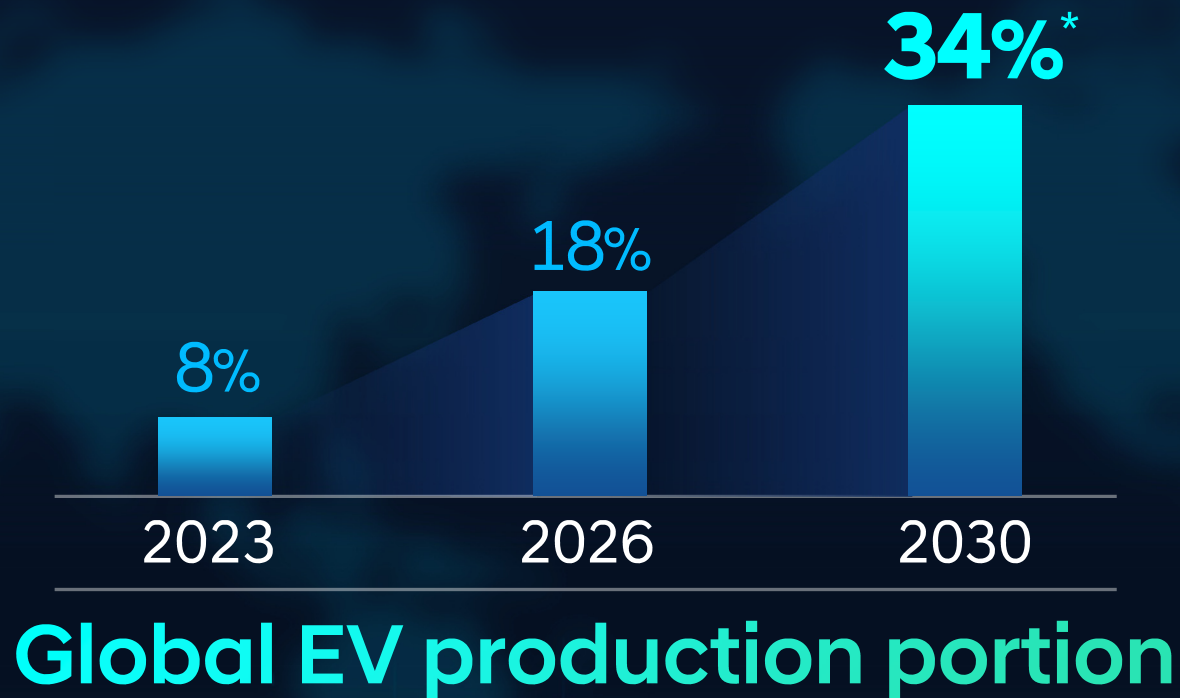
<sup>1)</sup> IONIQ 5- Ulsan plant / IONIQ 6- Asan plant

<sup>2)</sup> based on 1 assembly line



# Transition to EV production

Increase the portion of EV production efficiently through transition to EV lines and addition of new dedicated EV plants by region

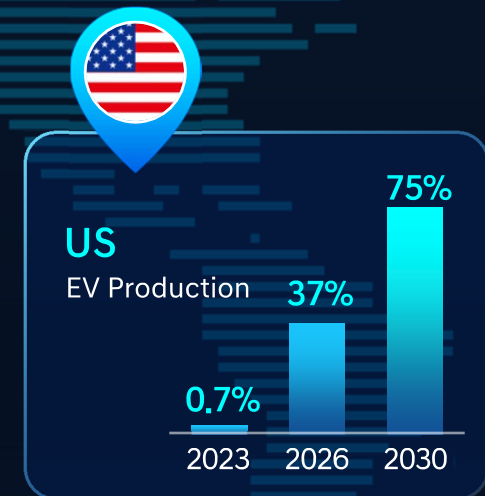
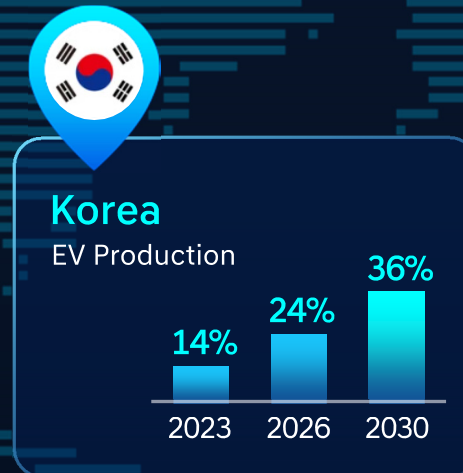
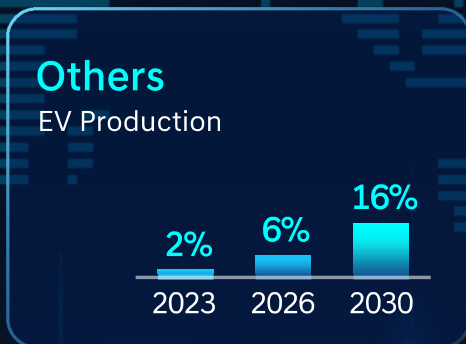
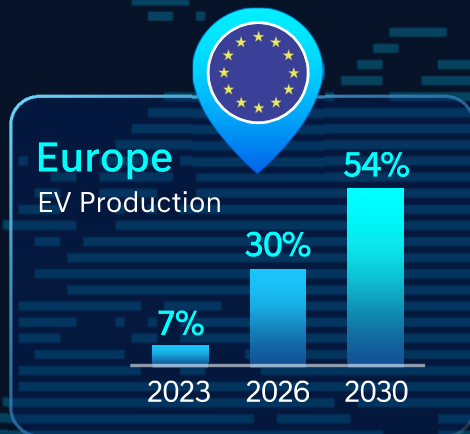


\* Major Market (Korea, US, Europe) 48%



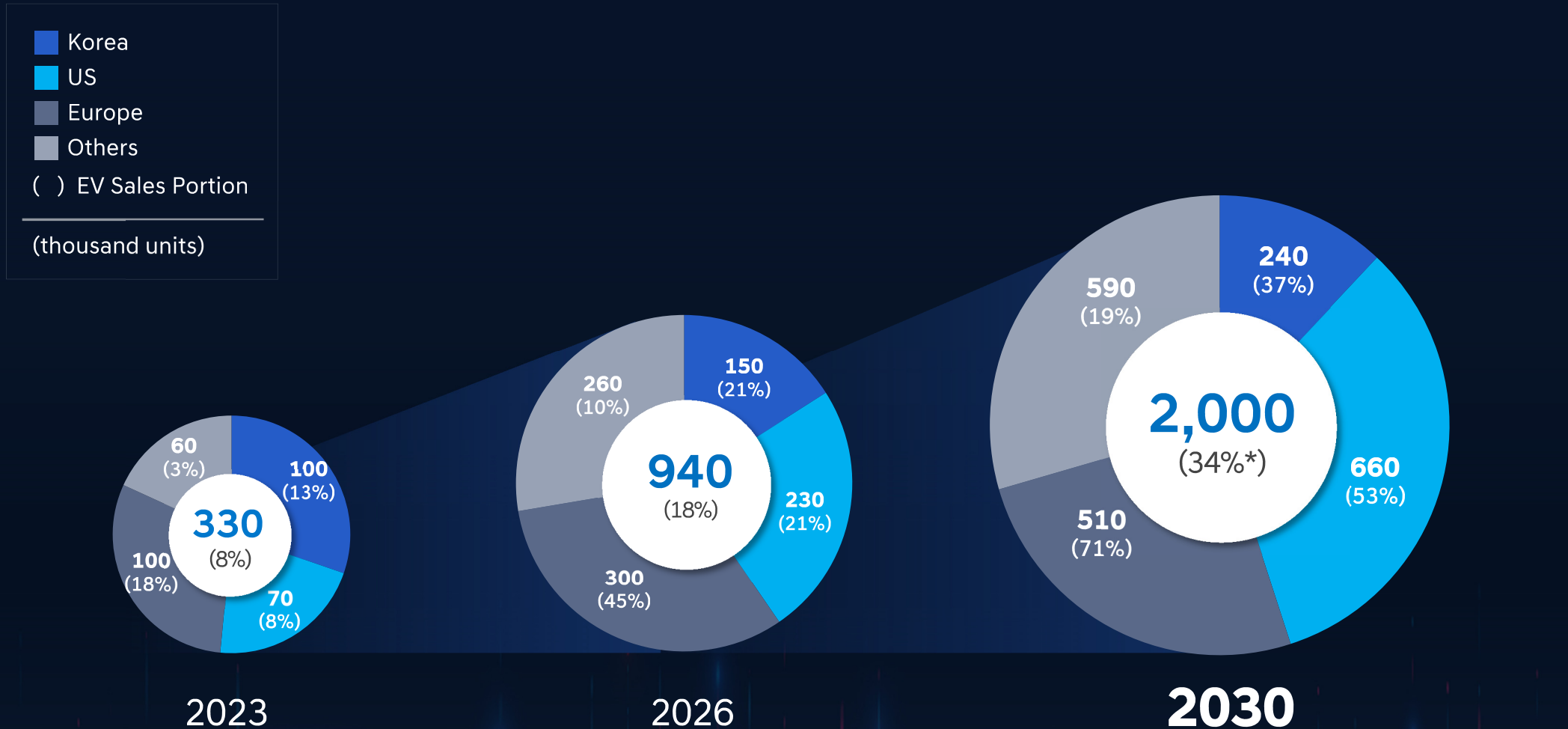
# Transition to EV production

Increase the portion of EV production efficiently through transition to EV lines and addition of new dedicated EV plants by region



# EV Sales Plan

Flexibility to adjust sales volume by transition of EV production according to market demand by region



\* Major Market (Korea, US, Europe) 53%



# Securing EV Profitability

Achieve 2030 EV profitability target of 10%+α for 2030 through integrated modular architecture and cost reduction efforts in the production stage

## 2030 EV Profitability **10%+α**



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# BATTERY

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# Battery - Development Capabilities

Enhance battery technology capabilities through specialized internal development organizations, coupled with expansion of external cooperation to further secure specialized technology and talent pool

**STRENGTHEN  
INTERNAL  
CAPABILITIES**



Specialized Battery Development Organizations

Battery Engineering Design / Safety Reliability and Performance Technology / Advanced Battery Development

Investment Expansion

Invest KRW 9.5 trillion in battery development and operations by 2032

# Battery - Development Capabilities

Enhance battery technology capabilities through specialized internal development organizations, coupled with expansion of external cooperation to further secure specialized technology and talent pool

## EXPAND EXTERNAL COOPERATION



### Battery manufacturer/Startups

- **Battery Manufacturers : SK on, LGES, etc.**
- **Startups : Solid Power (2018), SES (2021)**

### University/Research Center

#### **HMG -SNU Joint Battery Research Center** (JBRC, Nov. 2021)

- Joint research of Battery Management System(BMS), lithium metal battery, solid-state battery and manufacturing engineering
- Build dedicated research facility in SNU (Will be opened in July 2023)

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MOTOR GROUP





# Battery - Value Chain



**Establish a whole range of battery value chain with internal capabilities and external cooperation**

# Battery - Stable Procurement of Raw Materials

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Establish value chain from raw materials to battery recycling with partnership of key materials for electrification



Pursue purchase contracts of lithium to supply to battery JV in Indonesia (HLI Green Power)

Establish partnerships and continue to discuss with domestic/foreign organizations and governments focusing on key materials for electrification including lithium and nickel



# Battery - Stable Procurement of Raw Materials

Establish value chain from raw materials to battery recycling with partnership of key materials for electrification



**Establish recycling process by cooperating with affiliates and external parties centered on OEM**



# Battery - Design Capability

Utilize and enhance own battery engineering design capabilities such as adopting battery designed by HMC, and jointly developing LFP battery

Design  
capability

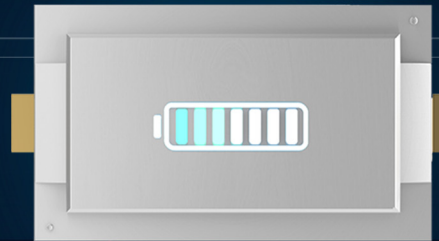
## Battery Design by HMC

High durability

High power

Safety

Cost  
competitiveness



New  
Hybrid



# Battery - Design Capability

Utilize and enhance own battery engineering design capabilities such as adopting battery designed by HMC, and jointly developing LFP battery

Joint development of  
LFP battery

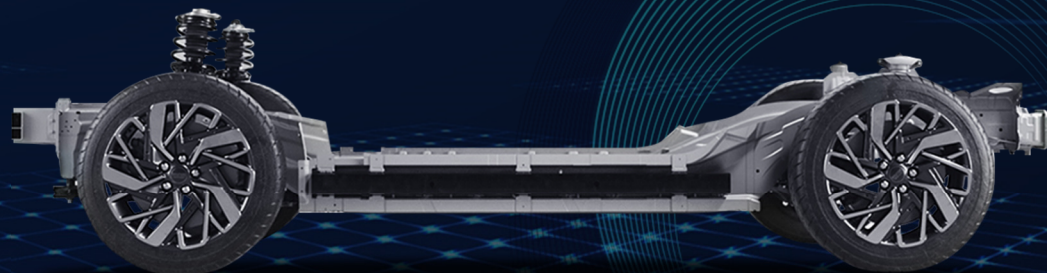
Jointly develop  
Cell & System for  
LFP Battery

Improve energy density  
and efficiency under low temperature

Around  
2025

Apply the battery to entry  
models and models for  
emerging markets first

Enhance cost competitiveness  
and diversify battery type



# Battery - Battery Management

Improve EV competitiveness by maximizing battery performance, life & efficiency and strengthening pre-diagnosis & prediction for battery life through battery management technology

## Total Thermal Management System



Maximize performance & efficiency

- **Battery Conditioning**  
Improve charging performance by optimizing battery temperature
- **Dedicated thermal management for high performance EV under N**  
Maximize driving power on track by managing temperature, SOC(State of Charge) and regenerative braking



## Advancement of BMS



Pre-diagnosis, battery life prediction

- **Pre-diagnosis**  
Realtime monitoring of battery state to prevent safety issue
- **Battery life prediction**  
Precise diagnosis of battery life by comprehensively managing battery state, life and data



# Battery - Next-generation Battery

Secure leadership for next-generation battery and strengthen EV/future mobility competitiveness by enhancing internal capabilities & diversifying external cooperation

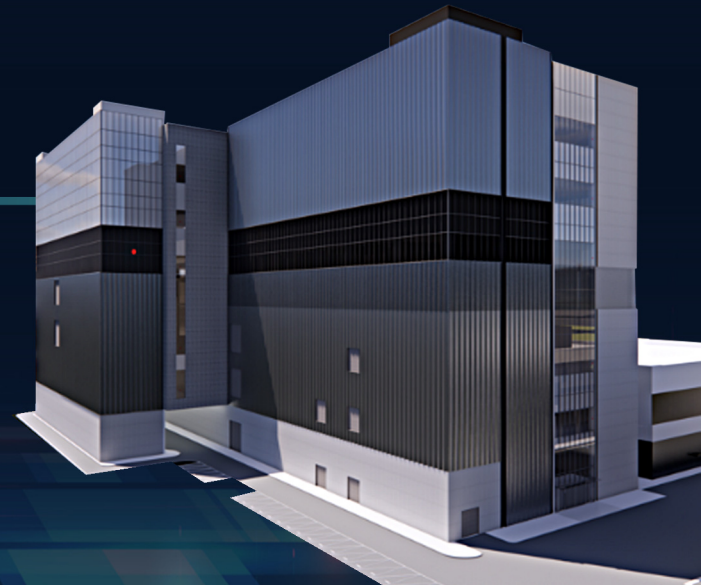


Joint Development + HMC Battery Development Center + HMG-SNU JBRC



**Next-generation battery research center**  
(Uiwang-si, Gyeonggi-do, 2024)

- Integrated research center for accelerating development of next-generation battery, such as lithium metal battery and solid-state battery
- Develop overall technology including materials, cell design, production process and mass production technology for next-generation battery



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# FUTURE BUSINESS



# Smart Mobility Solution Provider



# Autonomous driving (Motional)

- Global expansion after commercialization in 2023
- Motional & Uber, Mid- to long-term partnership for 10 years
- Autonomous driving cooperation with HMC through the entire value chain



## Achieve highest level of safety-first autonomous driving globally





# SDV (Software-defined Vehicle)

- 'Speed Boat strategy' in SDV innovation
- Global software center of HMG
- Maximize synergy through collaboration with R&D center

# 42dot

The answer to mobility and everything

## Accelerating SDV Development through Fast Track

**Step 1** S/W Internalization

**Step 2** SDV Demonstration

**Step 3** Advancement

Autonomous  
Technology

Mobility  
Technology

Software Defined

Energy  
Technology

Software  
Technology

Development of Core S/W  
Technology Platform for SDV



Verification of technology and  
expansion of service applications  
by applying to various mobility areas



Expansion of lineup based on  
SDV software advancement

# Boston Dynamics

※ Established BD AI R&D Center to accelerate research on robot intelligence (2022)

Boston Dynamics



## Continuous reinforcement of human-friendly robot technology leadership

### SPOT

Postural control, Moving IoT

Data keeper &  
Industrial site inspection



### STRETCH

Smart manipulator

Smart warehouse &  
Intelligent logistics automation



### ATLAS

Integration of advanced robot technology

Multi-purpose humanoids  
with advanced robot  
technology



# Robotics LAB

# Robotics LAB

**Development of service robot technology  
that creates new value at customer contact point**



**MEX, VEX, CEX**  
Motion detection wearable

Medical rehabilitation & industrial safety support



**Corner Module, MobED**  
Active posture control module

Multi-purpose mobile platform



**DAL-e**  
Customized platform for  
customer communication

Providing customer service



# Air mobility

- Project AirSim with MS (Autonomous Flight Solution)
- Joint research with Rolls-Royce on hydrogen fuel cell & battery propulsion systems
- Honeywell-Supernal, cooperation in development of electric air taxis
- Establishment of K-UAM consortium (HMC-KT-Hyundai E&C)





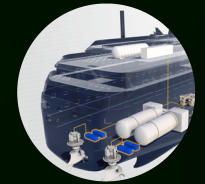
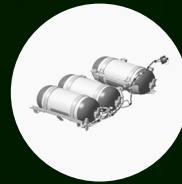
# Hydrogen Ecosystem

- Expand value chain based on hydrogen energy and secure new growth engine of Hyundai Motor Group
- Promote organic hydrogen business throughout the waste recycling and the entire automobile lifecycle
- Achieve the vision of hydrogen ecosystem by utilizing capabilities of affiliates



# Hydrogen Business Toolbox

## MOBILIZE ENERGY



Energy · Core Resources

Decarbonization of the workplace

Hydrogen Utilization (H<sub>2</sub> Offtake)

Zero Emission Logistics

### ✓ Waste to Energy(H<sub>2</sub>)

- Organic waste resources (livestock manure, food waste etc.)
- Waste plastic

### Heat Source

- Hydrogen burner
- Hydrogen-ready boiler

### FCEV, FC system

- FCEV
- Fuel cell system
- Emergency power generation, heavy equipment, Train, Marine vessels, etc.

### Road Transportation

- Port, airports decarbonization
- Service (Lease, PPU)
- Hydrogen charging Station

### ✓ Green Steel

- Raw material
- Intermediate goods

### Power Source

- Hydrogen turbine
- Fuel cell power generation

### Infrastructure

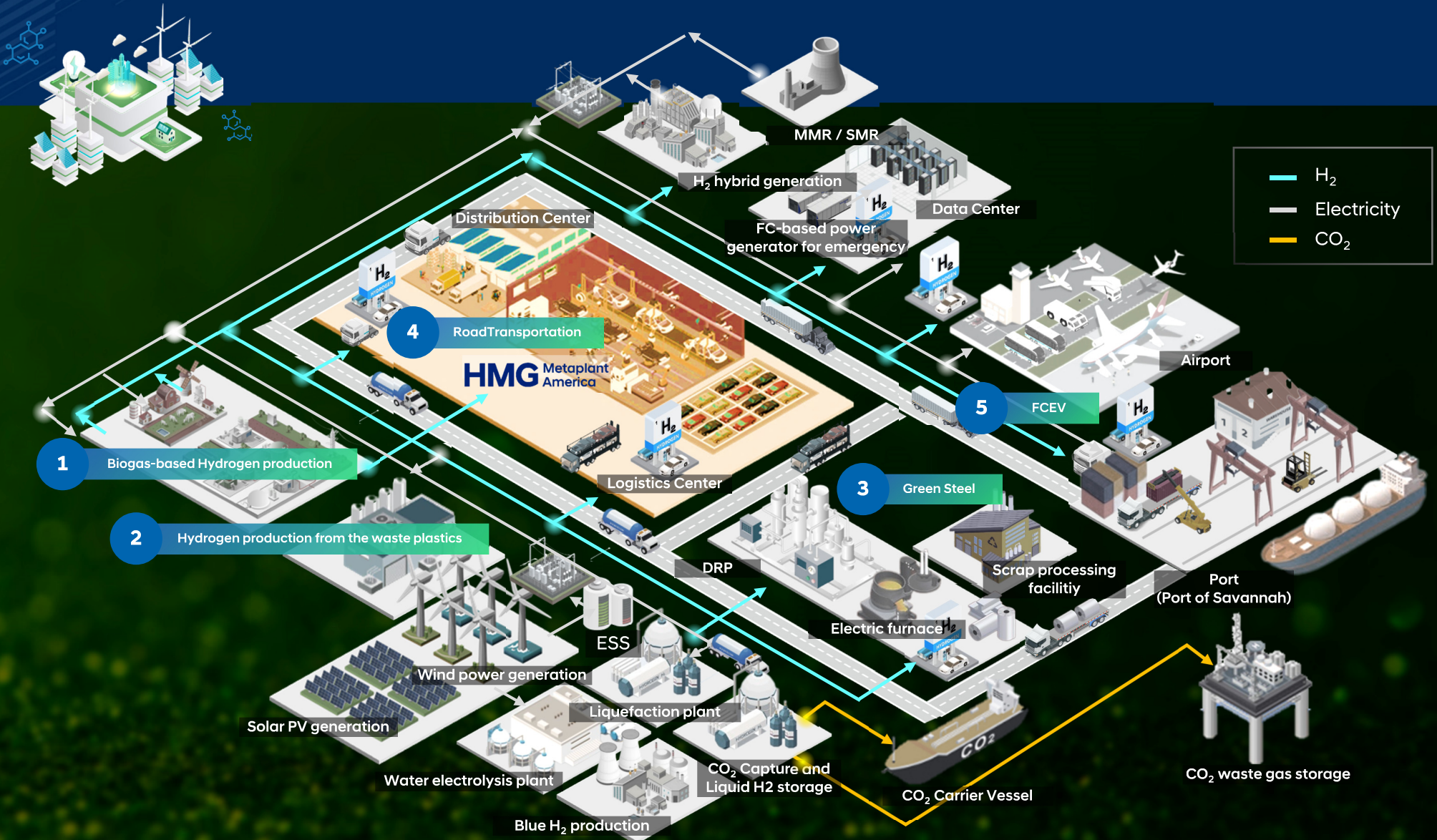
- Hydrogen Charging Station
- H<sub>2</sub> · ammonia terminal

### Sea transportation

- H<sub>2</sub>/Ammonia feeder
- H<sub>2</sub>/Ammonia shipper



# Hydrogen Ecosystem Vision





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# EPILOGUE

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# HYUNDAI MOTOR WAY

Securing Top-Tier Leadership of EV through timely response to the speed of electrification in the market with “Hyundai Motor Way”

# Progress for Humanity

HYUNDAI'S HERITAGE



TOP-TIER  
LEADERSHIP



Electrified N





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# HYUNDAI MOTOR WAY



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**THANK YOU**

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**Q & A**

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# RISK

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# Risk 1 : China

Improve profitability through business efficiency in China and strengthen competitiveness & differentiate customer experience to cope with intensifying global competition

## CHINA

Optimization of  
production capacity  
and lineup

Brand image improvement  
High performance N brand





# Risk 1 : China

Improve profitability through business efficiency in China and strengthen competitiveness & differentiate customer experience to cope with intensifying global competition

## CHINA



Reorganization of  
Sales Channels



Brand Image  
Improvement

# Risk 2 : Global supply chain restructuring

Establish local SCM by expanding local production and regional battery JV according to restructuring of global supply chain

## Expansion of Local Production

Global  
**34%\***

In 2030

US  
**75%**

Europe  
**54%**

Korea  
**36%**

Others  
**16%**

\* Major Market (Korea, US, Europe) 48%



# Risk 2 : Global supply chain restructuring

Establish local SCM by expanding local production and regional battery JV according to restructuring of global supply chain

## Expansion of Battery JV

Global  
**70%\***

Since 2028

### Indonesia

One Battery JV  
10GWh,  
Operate from 2024

### US

Two Battery JV  
65GWh,  
Operate from 2025



# NEW

Establishment of new JV  
and capacity expansion  
of existing JV  
are under consideration

\* Portion of battery procurement from JV out of total necessary battery capacity

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