

Automotive Battery Business Briefing

Friday, March 15, 2024

GS Yuasa Corporation

GS Yuasa International Ltd. Automotive Battery Business Unit

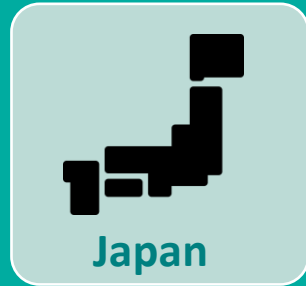
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| • Demand Trends | |
| • Market Share Trends | |
| 3. Medium- to Long-term Strategy | 17 |
| • Strategic Approach | |
| • Outline of Individual Strategies | |

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1 Automotive Battery Business Overview

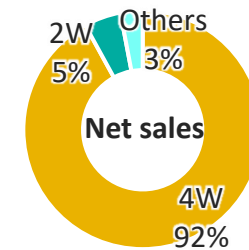
● Business Overview

We are engaged in the development, production, and sales of lead-acid batteries for use in automobiles, motorcycles, etc. In Japan, we operate as a manufacturer, while overseas, we are engaged in direct export sales and other operations centered on management and support of overseas sites.



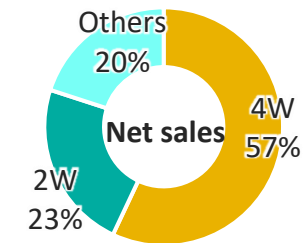
<Development, production and sales in Japan>

- Development and production at 4 domestic plants
- Sold to car manufacturers and replacement customers
- Net sales of approx. 95 billion yen and a high market share



<Overseas sites management and direct export sales>

- 18 sites worldwide
- Provide technical and development support, etc.
- Net sales of approx. 250 billion yen



1 Automotive Battery Business Overview

History of Automotive Batteries

GS (Japan Storage Battery)



Inventor's spirit contribute to society by developing high quality products

Founder of Japan Storage Battery Co., Ltd.
Genzo Shimadzu



1917:

Establishment of Japan Storage Battery Co., Ltd.

1919:

Start of automotive lead-acid batteries production

1954:

Marketing of small and light batteries for motorcycles

1966:

Establishment of first overseas site in Thailand (Siam GS Battery Co., Ltd.)

2004

Corporate Merger

2015:

Marketing of European Norm (EN) lead-acid batteries

2022:

Conversion Turkey site to a consolidated subsidiary

1918:

Establishment of Yuasa Storage Battery Co., Ltd.

1920:

Start of automotive lead-acid batteries production

1954:

Marketing of small and light batteries for motorcycles

1963:

Establishment of first overseas site (Yuasa Battery (Thailand) Pub. Co., Ltd.)

2009:

Development of lead-acid batteries for vehicles with start-and-stop systems (ISS: idling stop systems)

2016:

Acquisition of lead-acid batteries business from Panasonic Corporation

2023:

Conversion two subsidiary companies in China to an equity-method affiliate



Challenging spirit develop new businesses ahead of time

Founder of Yuasa Storage Battery Co., Ltd.
Shichizaemon Yuasa

YUASA (Yuasa Corporation)



1 Automotive Battery Business Overview



● Products

Lead-acid batteries for automobiles



Batteries for general passenger cars



Batteries for ISS vehicles



Auxiliary batteries (for HEVs)



Batteries for heavy-duty vehicles (trucks, buses, etc.)

Environmental Contribution

Lead-acid batteries for motorcycles

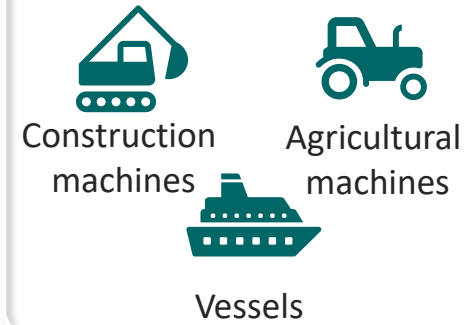


Open cell batteries



VRLA batteries

Other uses

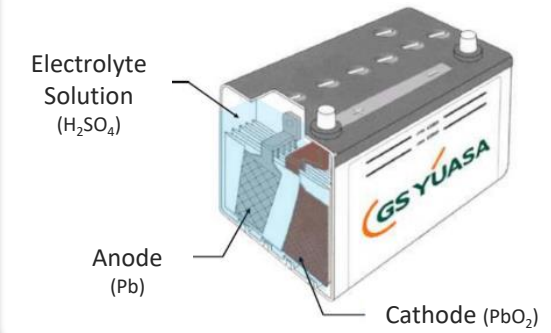


Construction machines

Agricultural machines

Vessels

Structure of lead-acid batteries



1 Automotive Battery Business Overview

Corporate Merger

First Medium-term Management Plan (FY2006-FY2008)

Second Medium-term Management Plan (FY2010-2012)

Third Medium-Term Management Plan (FY2013-2015)

Fourth Medium-Term Management Plan (FY2016-2018)

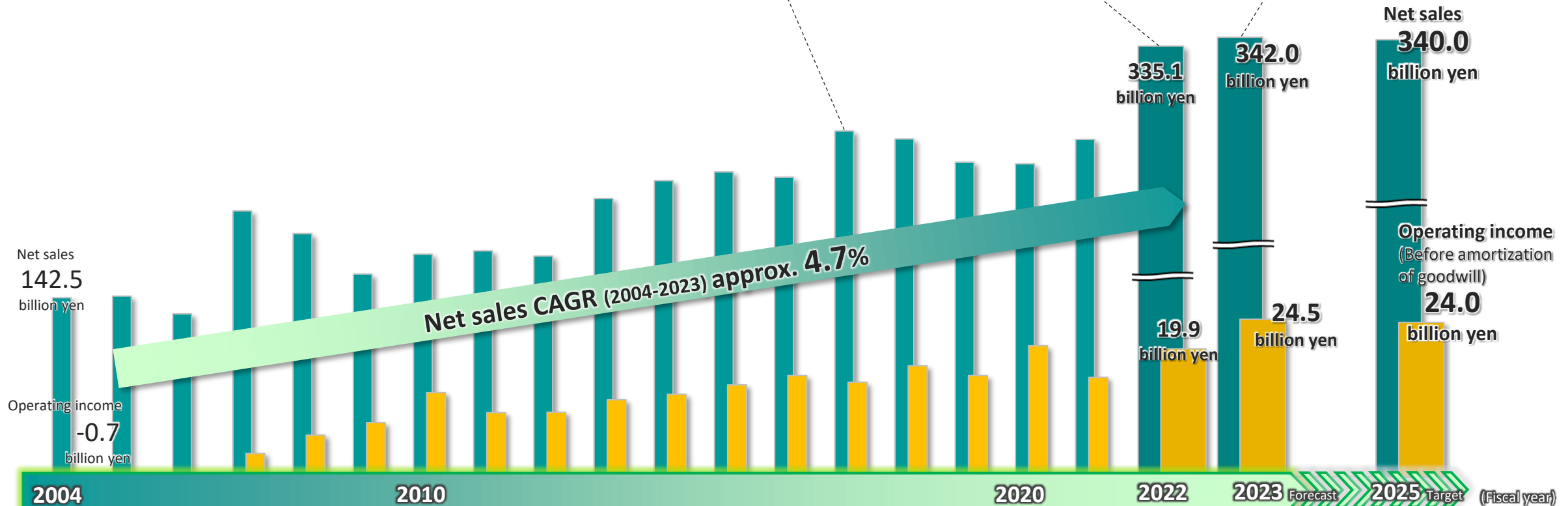
Fifth Medium-Term Management Plan (FY2019-2022)

Sixth Medium-Term Management Plan (FY2023-2025)

October 2016
Acquisition of lead-acid batteries business from Panasonic Corporation

April 2022
Conversion Turkey site to a consolidated subsidiary

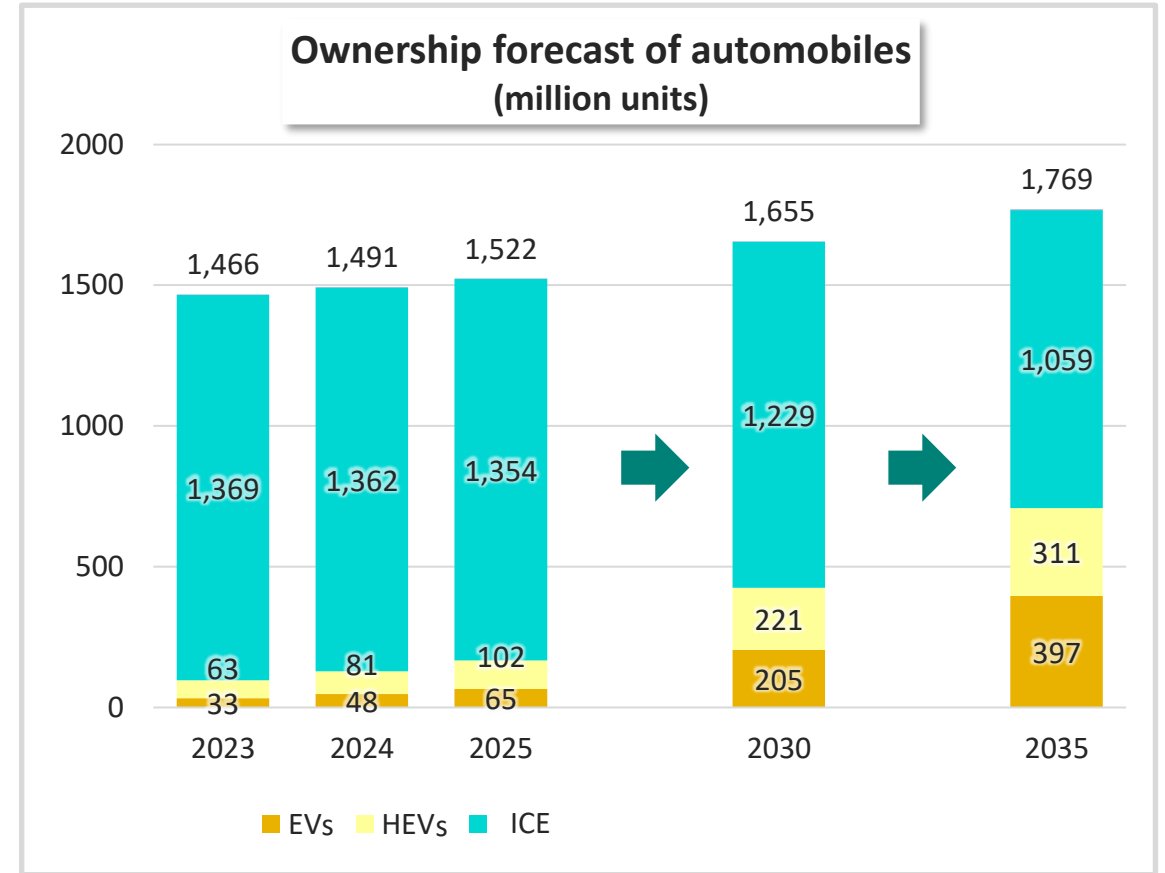
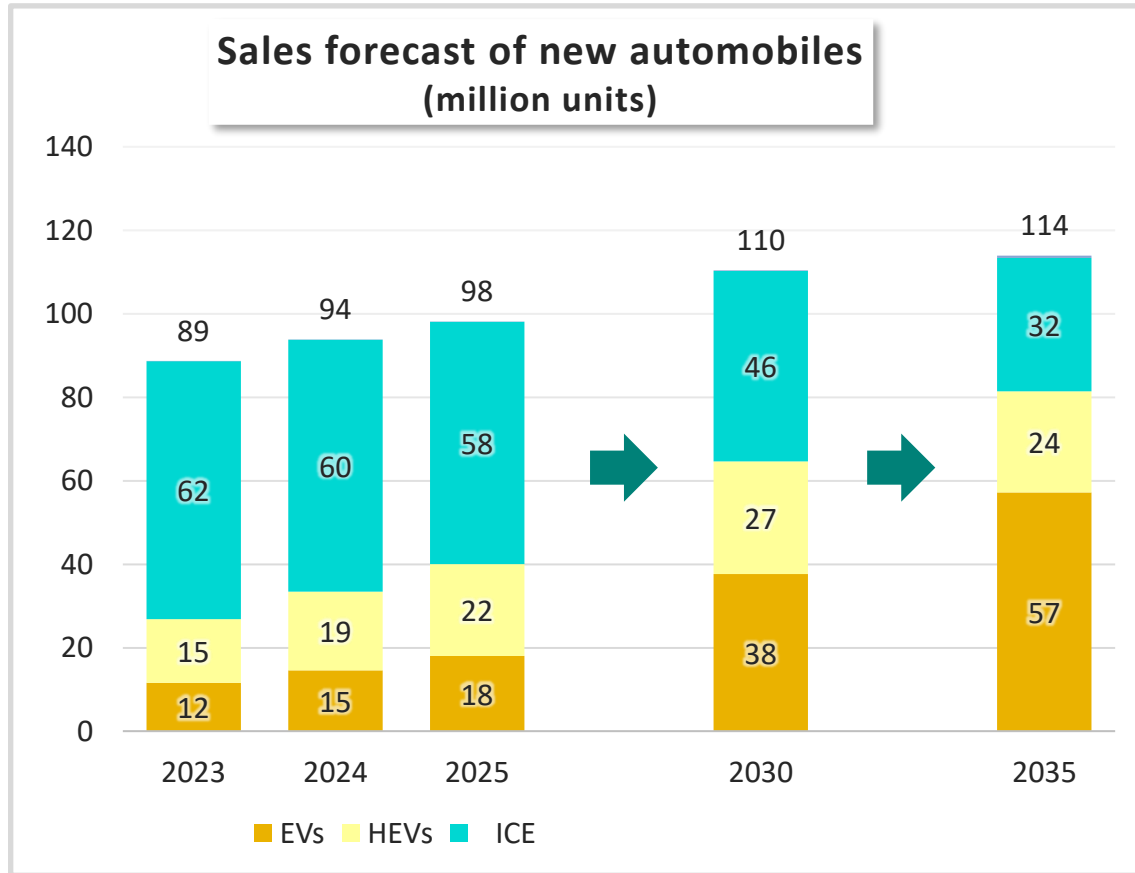
October 2023
Transfer of China site of equity



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2 Market Trends

For automobiles: Forecast of global vehicle volume

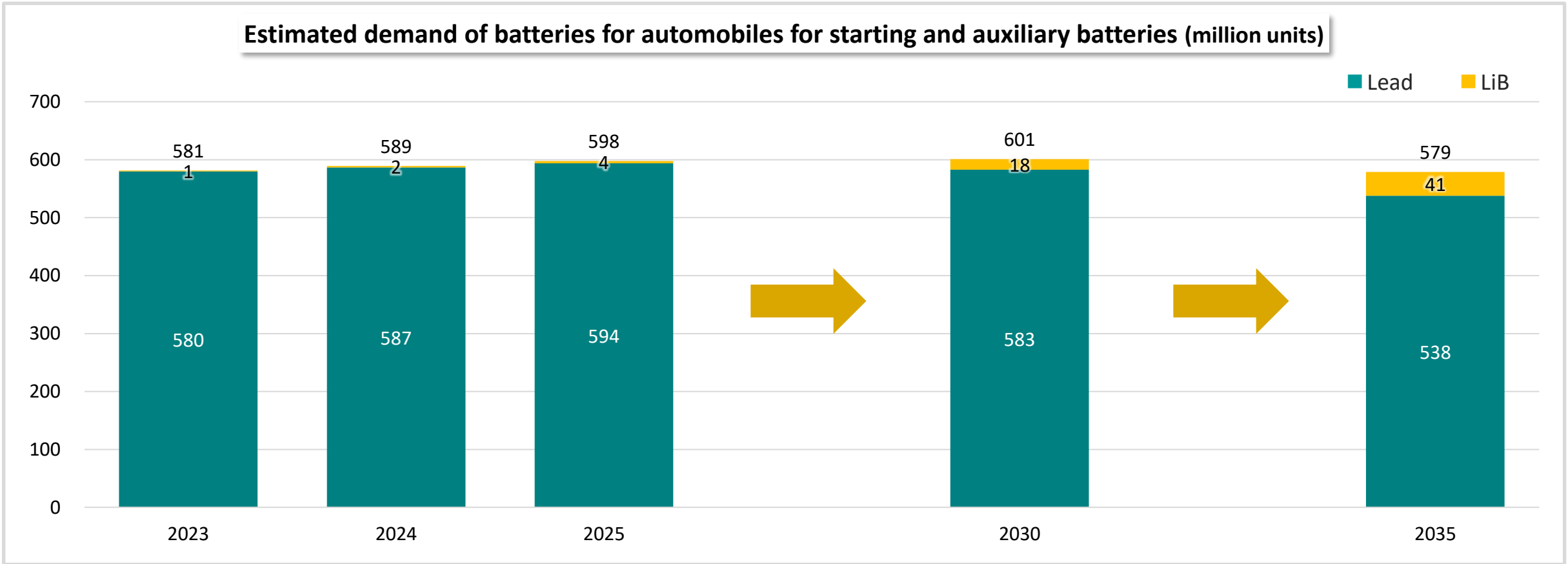


Note: Prepared by GS Yuasa based on materials

- Sales of new electric vehicles will increase, with EVs accounting for about half of new automotive sales in 10 years.
- In terms of the ownership, EVs will gradually increase mainly in developed countries and China, but will only account for about 20% of the total in 10 years.

2 Market Trends

For automobiles: Global battery demand forecast (starting and electric vehicle auxiliary batteries / excluding for drive force)

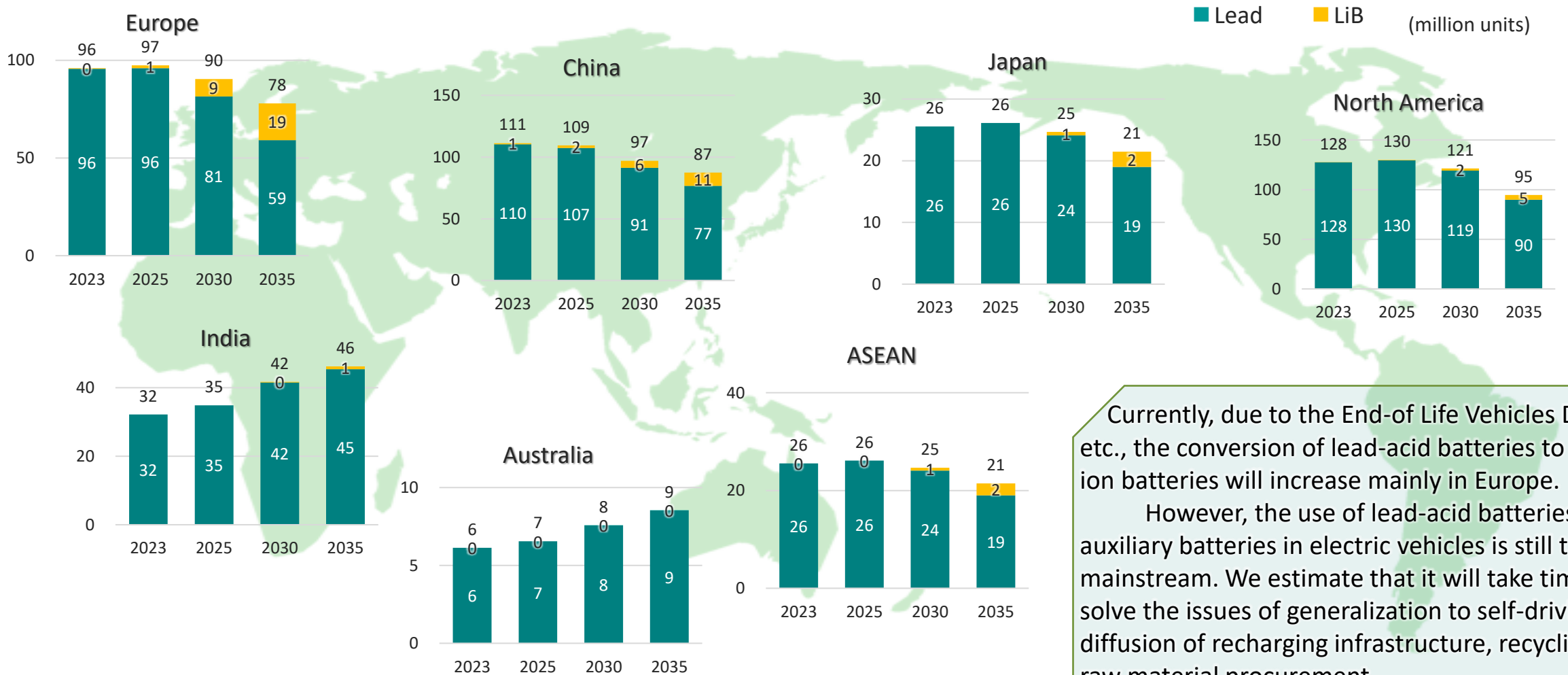


Note: Prepared by GS Yuasa based on materials

- Since electric vehicles are often equipped with lead-acid batteries as auxiliary batteries, we assume that the demand for lead-acid batteries will not decline at an accelerated pace.
- The change in battery demand depends on factors other than vehicle electrification, such as population (licensed population) increase or decrease, infrastructure and policies in each country, etc.

2 Market Trends

For automobiles: Battery demand forecast by main region (starting and electric vehicle auxiliary batteries / excluding for drive force)



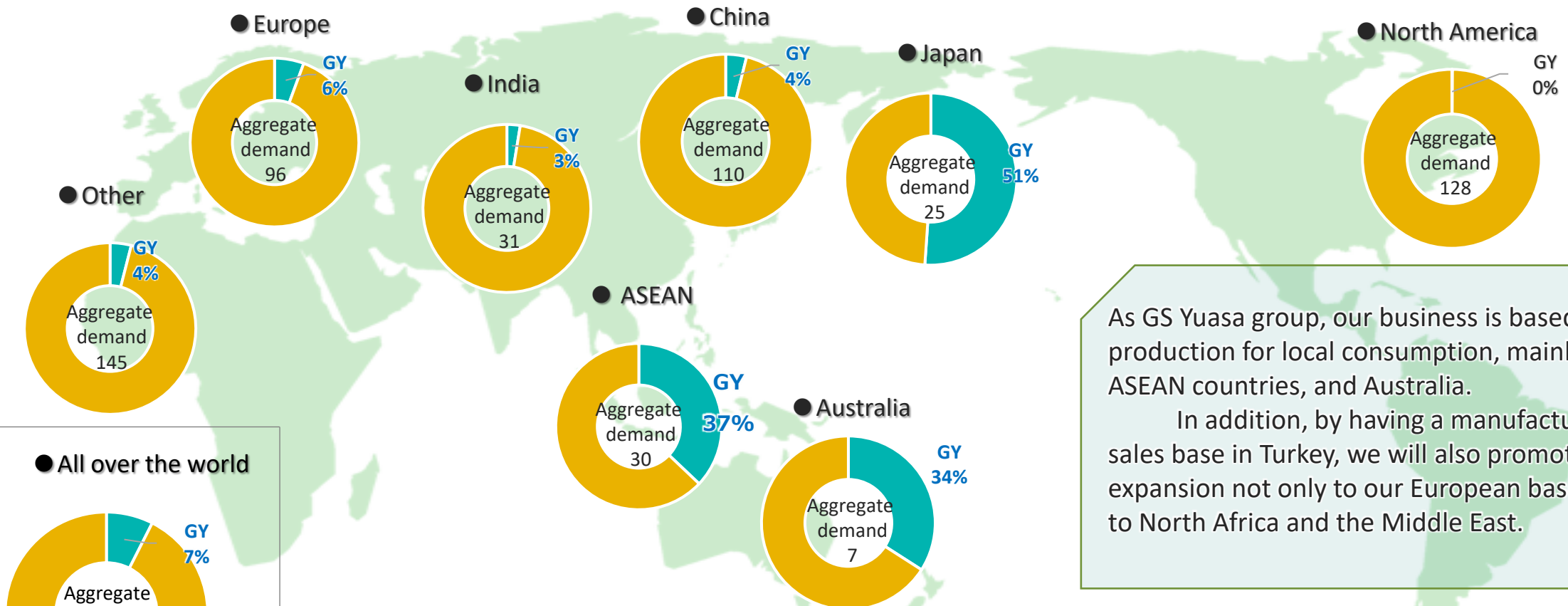
Currently, due to the End-of Life Vehicles Directive, etc., the conversion of lead-acid batteries to lithium-ion batteries will increase mainly in Europe. However, the use of lead-acid batteries for auxiliary batteries in electric vehicles is still the mainstream. We estimate that it will take time to solve the issues of generalization to self-driving cars, diffusion of recharging infrastructure, recycling, and raw material procurement.

Note: Prepared by GS Yuasa based on materials

2 Market Trends

Share: estimated share of automotive lead-acid batteries by major region (FY2022)

(aggregate demand: million units)



As GS Yuasa group, our business is based on local production for local consumption, mainly in Japan, ASEAN countries, and Australia.
 In addition, by having a manufacturing and sales base in Turkey, we will also promote sales expansion not only to our European bases but also to North Africa and the Middle East.

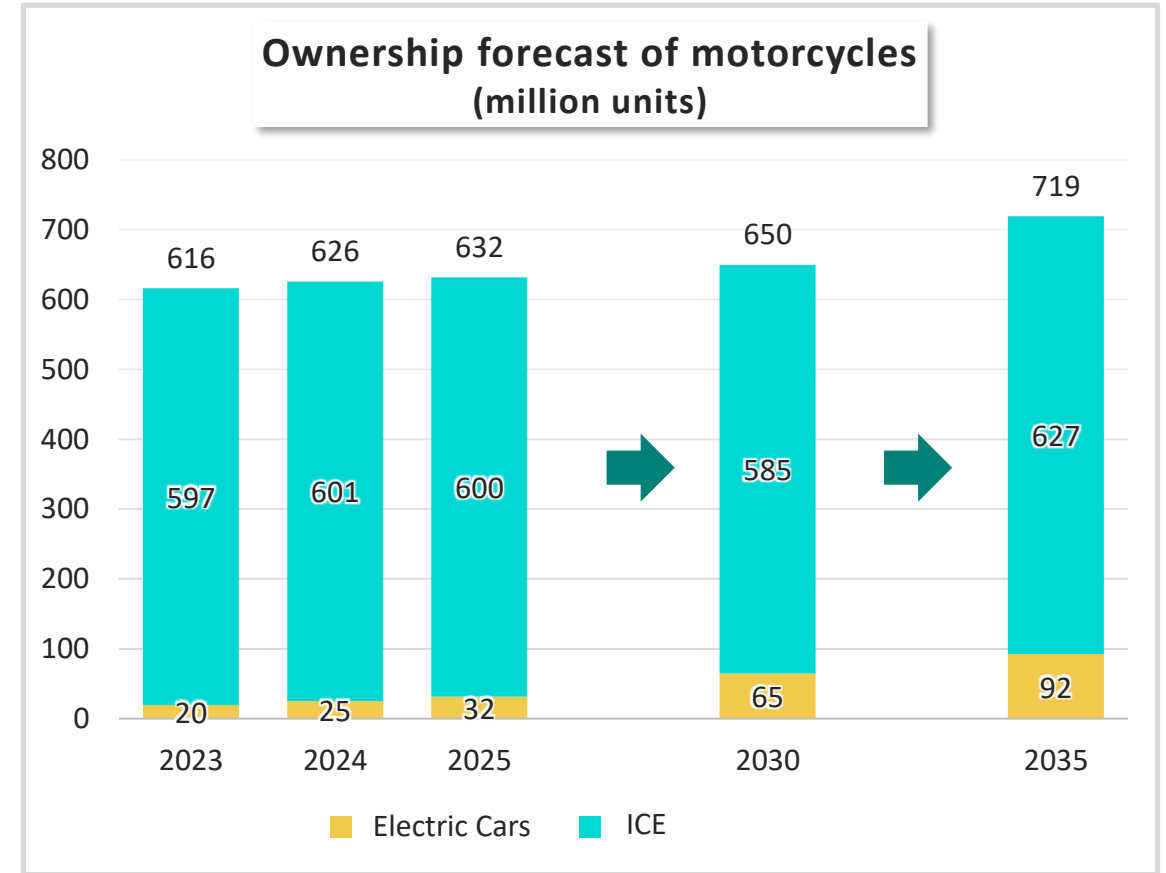
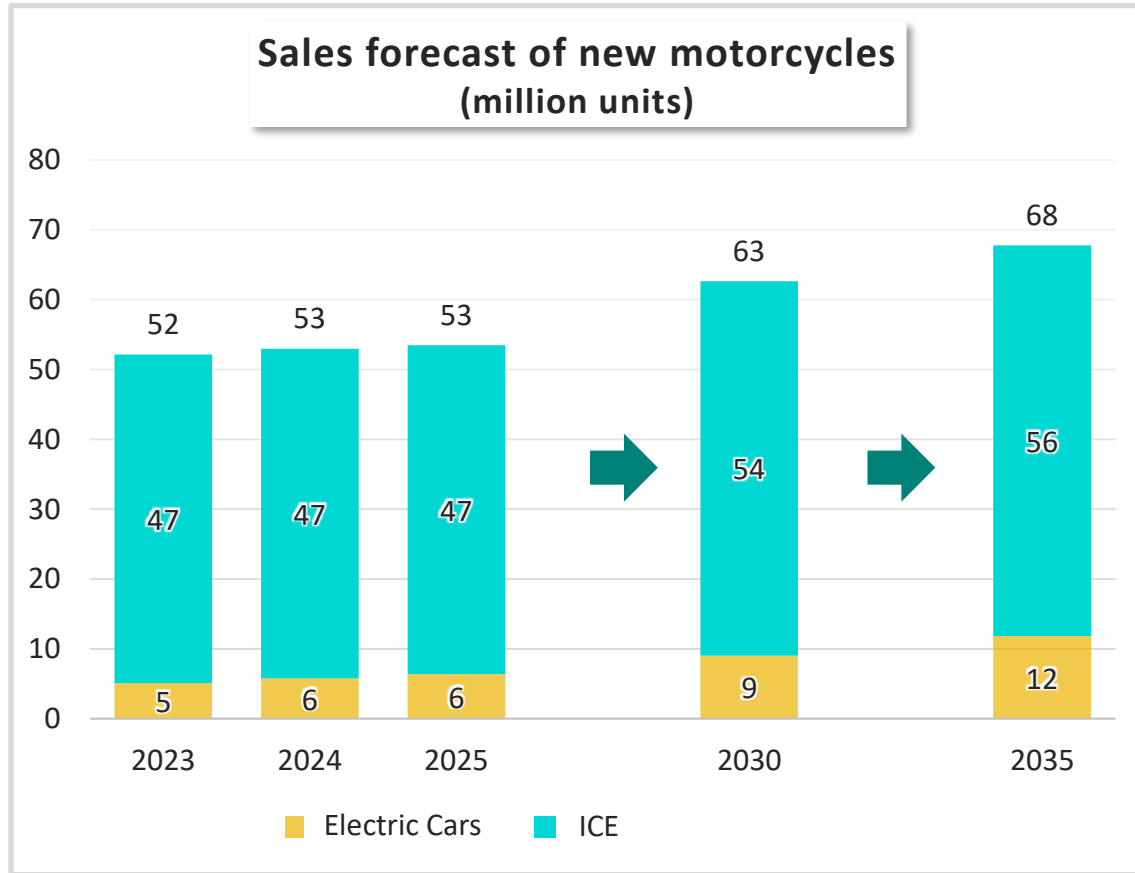
□ Sales Volume Weights of GS Yuasa (for automobiles)



Note: Based on the Company research

2 Market Trends

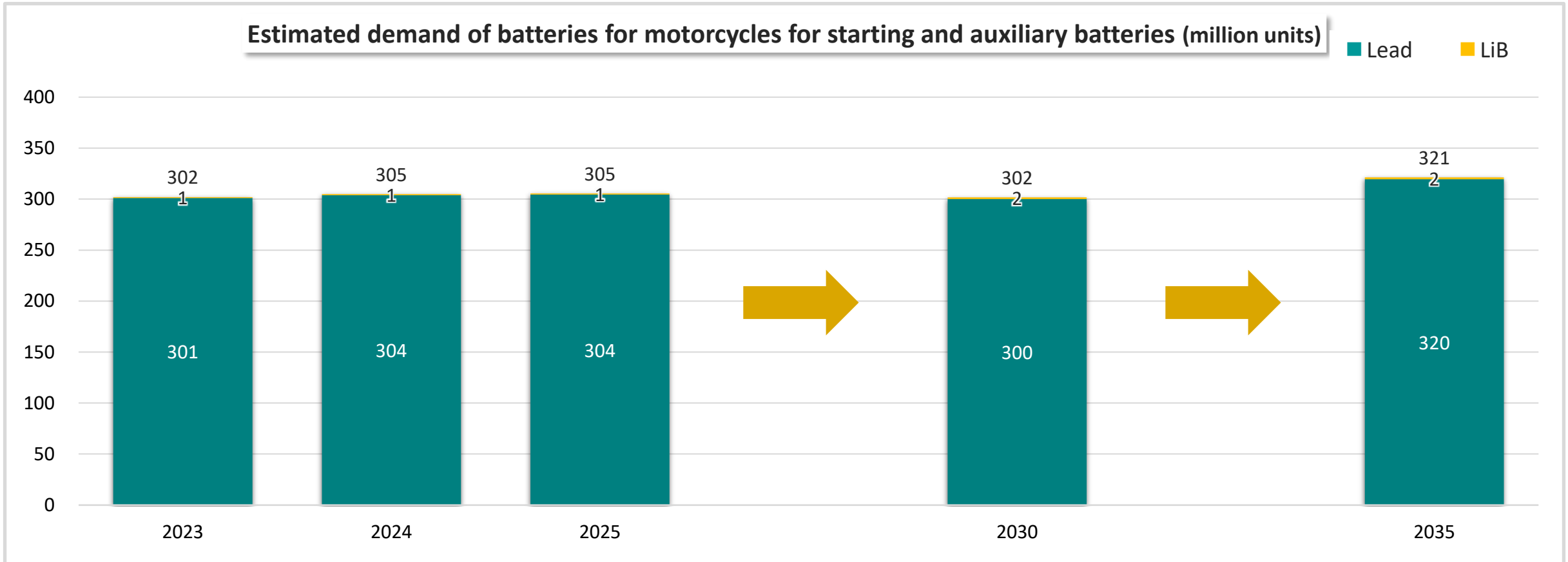
For motorcycles: Forecast of global vehicle volume



- Motorcycle sales are projected to increase, especially in India.
- Motorcycle is often used as everyday transportation, and we estimate that electrification is limited to corporate customers.

2 Market Trends

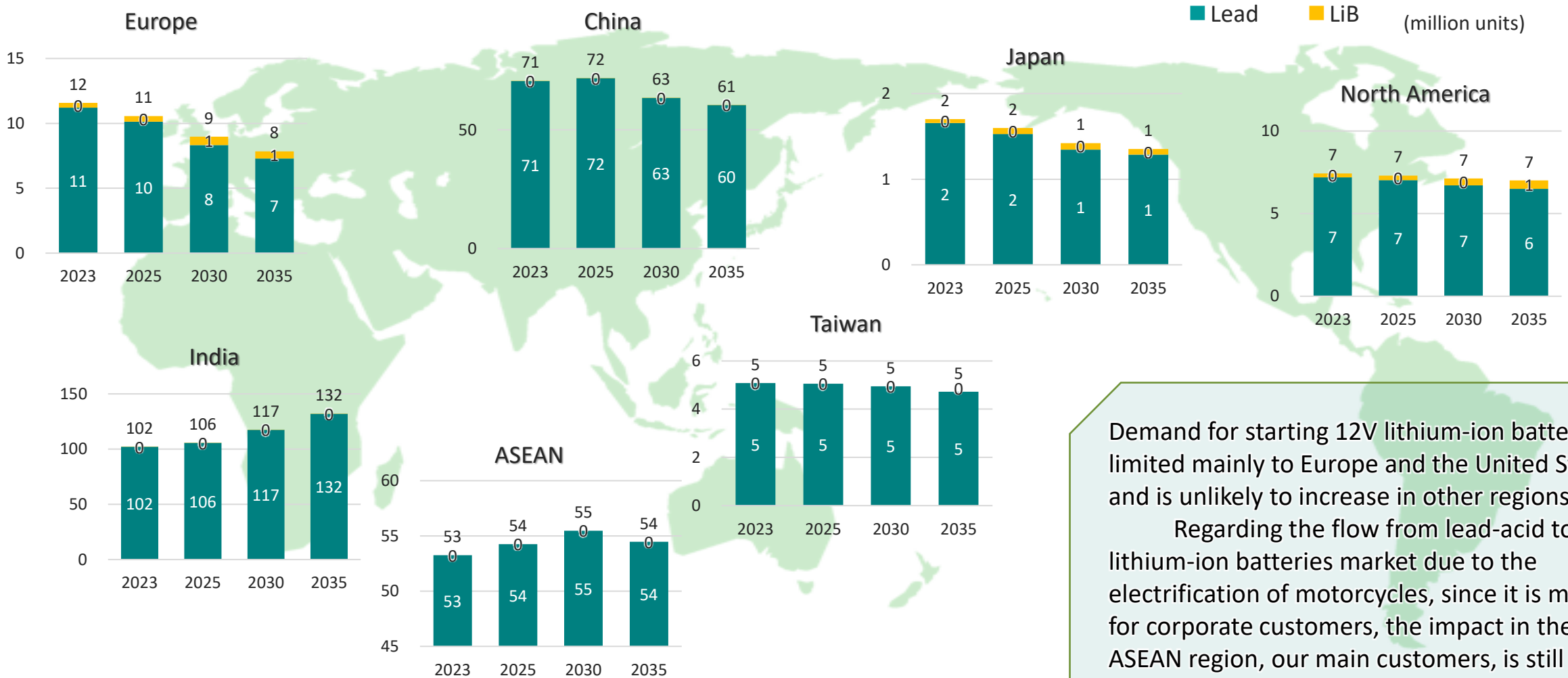
For motorcycles: Global battery demand forecast (starting and electric vehicle auxiliary batteries / excluding for drive force)



- Demand for motorcycles is mostly for daily use in non-developed countries such as ASEAN and India, and it will take time for the shift to electric vehicles to take off.
- In addition to the limited space for batteries in two-wheeled electric vehicles, there are still many issues to be addressed, such as the need for small size, flexibility in shape, and cost advantages.

2 Market Trends

For motorcycles: Battery demand forecast by main region (starting and electric vehicle auxiliary batteries / excluding for drive force)



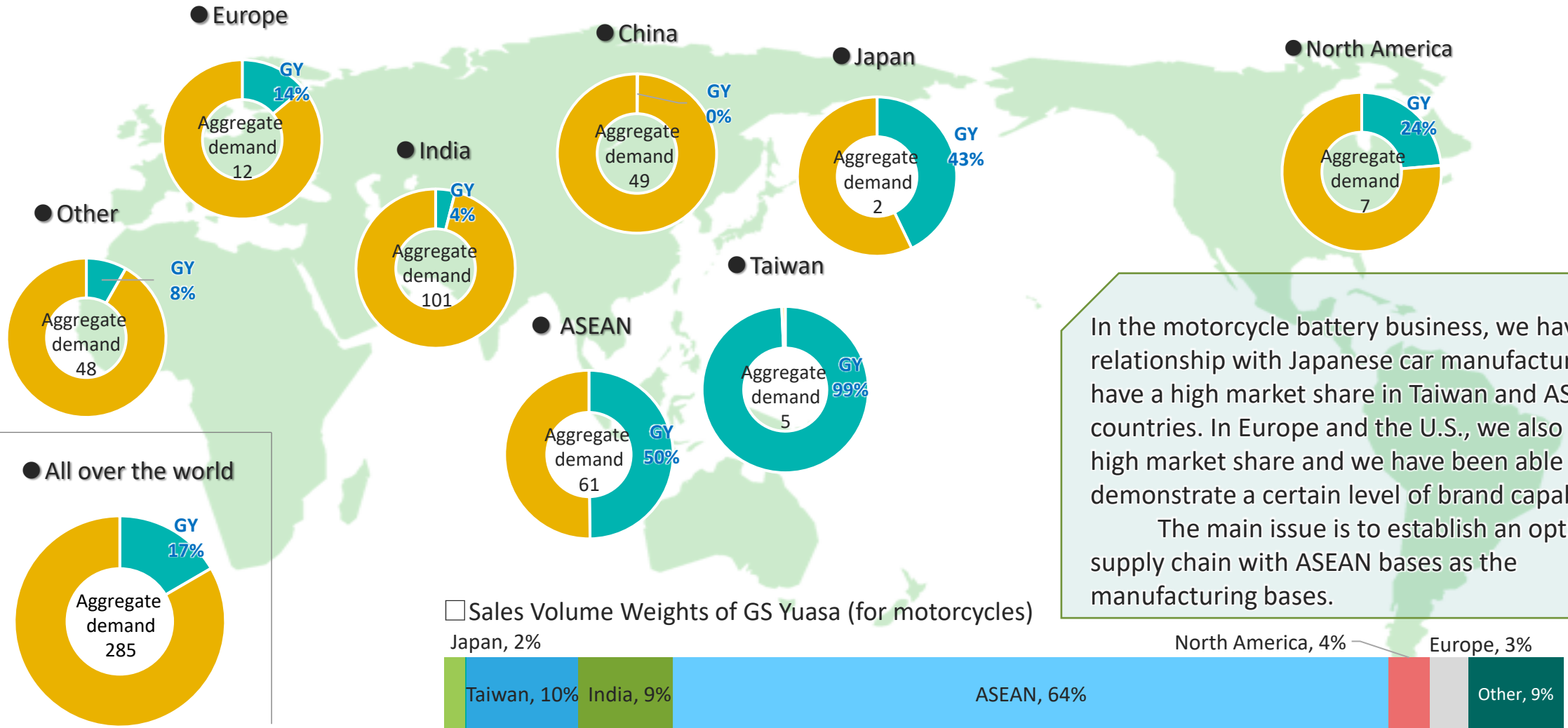
Demand for starting 12V lithium-ion batteries is limited mainly to Europe and the United States and is unlikely to increase in other regions.

Regarding the flow from lead-acid to lithium-ion batteries market due to the electrification of motorcycles, since it is mainly for corporate customers, the impact in the ASEAN region, our main customers, is still small.

2 Market Trends

Share: estimated share of lead-acid batteries for motorcycles by major region (FY2022)

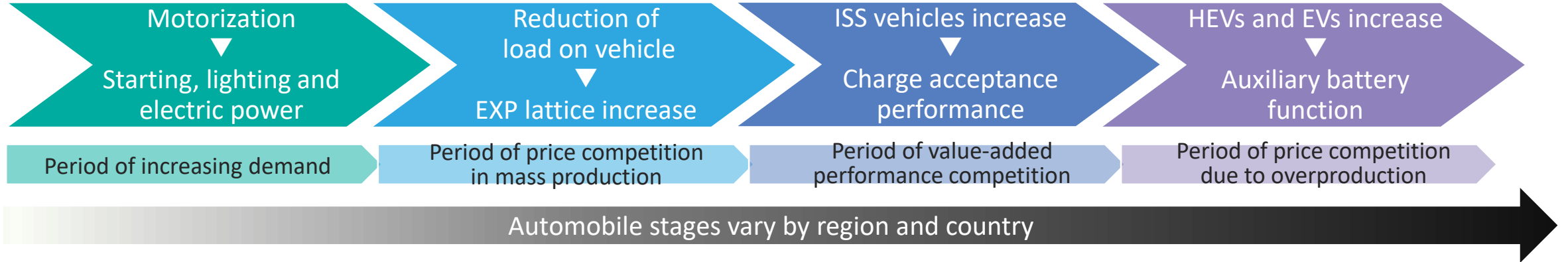
(aggregate demand: million units)



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3 Sixth Mid-Term Management Plan

● Evolution of Automotive Lead-acid Batteries



● History of GS Yuasa's Policy

- ✓ Evolve batteries and accumulate know-how based on the development of Japanese automobiles
- ✓ Expand business sites globally in tandem with market size and expansion (local production for local consumption)

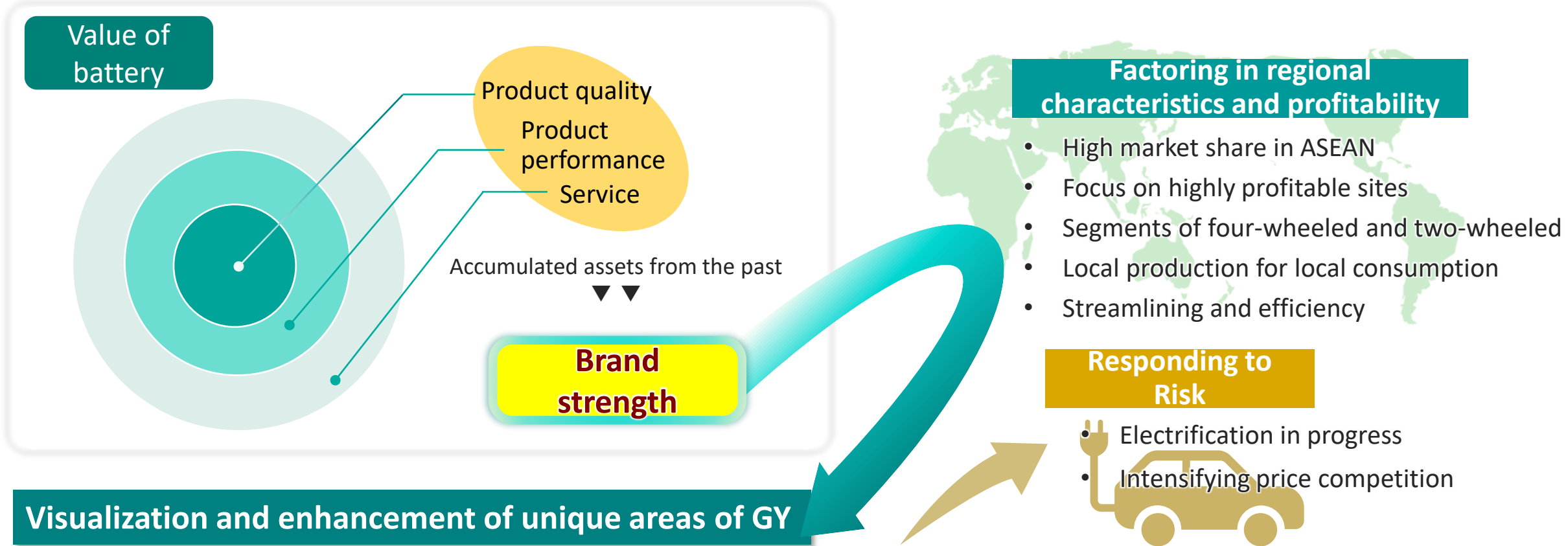


● GS Yuasa's Strengths

- ✓ Development, manufacturing, and know-how of batteries matched to vehicles
- ✓ Cooperation with overseas partners, especially in ASEAN
- ✓ Sales network of distributors and other agents in each region

Formation of brand strength

3 Sixth Mid-Term Management Plan



- ✓ Improve **brand value** of technical knowledge, know-how, services, etc.
- ✓ Improve **profitability** through efficient management
- ✓ Strengthen **BCP** and **supply system** by optimizing production system and supply chain

3 Sixth Mid-Term Management Plan

● Positioning of the Sixth Mid-Term Management Plan

We aim to become an "innovative and well-established company" by clearly stating and spreading the value of our existence and expanding our earnings based on our assets, "lead-acid battery technology development capabilities" and "sales channels, partners, and services". The Sixth Mid-Term Management Plan period is "a period for strengthening the management foundation" for this purpose.

Laying the groundwork for increased earnings and efficiency in the lead-acid battery business

1st -FY2025

- Theme
 - Restructuring management structure and visualization and polishing strengths
- Points
 - ✓ Improvement in operating income ratio
 - ✓ BCP promotion
 - ✓ Visualization of strengths

Target for FY2025

- Japan : Net sales of ¥100.0 billion yen and operating income of ¥7.0 billion
- Overseas : Net sales of ¥240.0 billion and operating income of ¥17.0 billion

Transformation into a business that can secure stable earnings

2nd -FY2028

- Theme
 - Expansion of earning rate and evolution and penetration of unique value
- Points
 - ✓ Creation of brand value
 - ✓ Completion of BCP promotion system
 - ✓ Promotion of management efficiency

Transformation into an "innovative and well-established company"

3rd -FY2034

- Theme
 - Earning solid revenues Model establishment and continuation
- Points
 - ✓ Strengthening of revenue base
 - ✓ Considering next business model
 - ✓ Selection and concentration

3 Medium to Long-Term Plan

Japan



- **Creation of roadmap for optimal production system**
 - Establishment of a production system with an eye to the future
 - BCP Promotion
 - Promotion of manpower saving
- **Improve profitability of sales of new automotive batteries**
 - Promotion of fair selling prices
 - Promote activities linked to the market for replacement
- **Restructuring of marketing for sales of replacement batteries**
 - Restructuring of marketing strategy

Establishment of optimal supply system responding to changes in the business environment and improvement of earning rate

- **Develop strategies by region and individual company**
 - Concentrate strategy especially on ASEAN
 - Optimization and stabilization of supply chain
 - Development of joint strategy with Industrial Batteries and Power Supplies Division
 - Sales expansion in the replacement market
- **Sustainable Management**
 - Improve global management efficiency
 - Promote production efficiency and rationalization
 - CSR Promotion

Reform management structure and strengthen profitability for the future due to selection and concentration



Overseas

3 Medium to Long-Term Plan

● Priority Issues (Japan)



Profitability improvement

- Improvement of profitability by appropriately reflecting raw material prices, etc. in selling prices
- Creating a revenue-generating system linked to the replacement market, 12V lithium-ion batteries, etc.



Creation and starting of optimal production system proposal

- Establishment of optimal production system plan for the future
 - ✓ Establishment of stable production and supply system
 - ✓ Rapid response to demand fluctuations
 - ✓ Promote rationalization and efficiency



Marketing reconstruction

- Restructuring of marketing strategy
- Efficient operation of business management
- Expand sales of high value-added batteries

We will plan immediately to establish our strategies for the new car society such as declining birthrate, aging population, young people's shift away from cars, etc.

In addition, we also establish a system and structure for earning revenue as we reduce supply risk for the growing needs of new car manufacturers for us.

3 Medium to Long-Term Plan

● Priority Issues (Overseas)



ASEAN ; Automotive batteries



- Expansion centered on the Thailand site
- Expansion of production capacity and efficiency
- Expansion to neighboring countries

In the automotive battery business, we will strengthen our competitiveness by promoting enhancement and streamlining of the production system, centered on the Thailand site. We also promote sales expansion to neighboring countries and build a solid structure in lead-acid batteries business in the ASEAN region.

In addition, we will further strengthen our brand strength that we have built with our partners.

In the motorcycle battery business, mainly at the Indonesian site, we will sublimate global and stable supply chain into something solid.

We also strengthen its activities rooted in the market by maximizing the use of wide range of product lineup, overwhelming production volume, and brand strength.



ASEAN ; Motorcycle batteries



- Focusing on the Indonesia site
- Stabilization of supply chain
- Cost reduction
- Capturing demand in Vietnam

3 Medium to Long-Term Plan

● Priority Issues (Overseas)



Europe



- Automobiles: Expand sales to Europe, North Africa, and the Middle East
- Motorcycles: Optimization of global Supply Chain
- Electrification: Expand sales of industrial batteries

In Australia, we will create added value and increase the value of our presence in Australian society, based on the original marketing strategy (Made in Australia) promoted under the COVID-19.



In Europe, in addition to the existing sales sites, with the consolidation of a production site in Turkey in FY2022, we aim to gain residual profit by expanding sales due to prompt supply of products to North Africa and neighboring countries.

In addition, our European sites have focused on industrial batteries in the past. We are working to strengthen activities to ensure profitability as a site.



Australia



- Promote unique marketing in Australia
 - ✓ Product strategy of “Made in Australia”
 - ✓ Production capacity expansion
 - ✓ Strengthening of unique services