

# SPV Business Presentation

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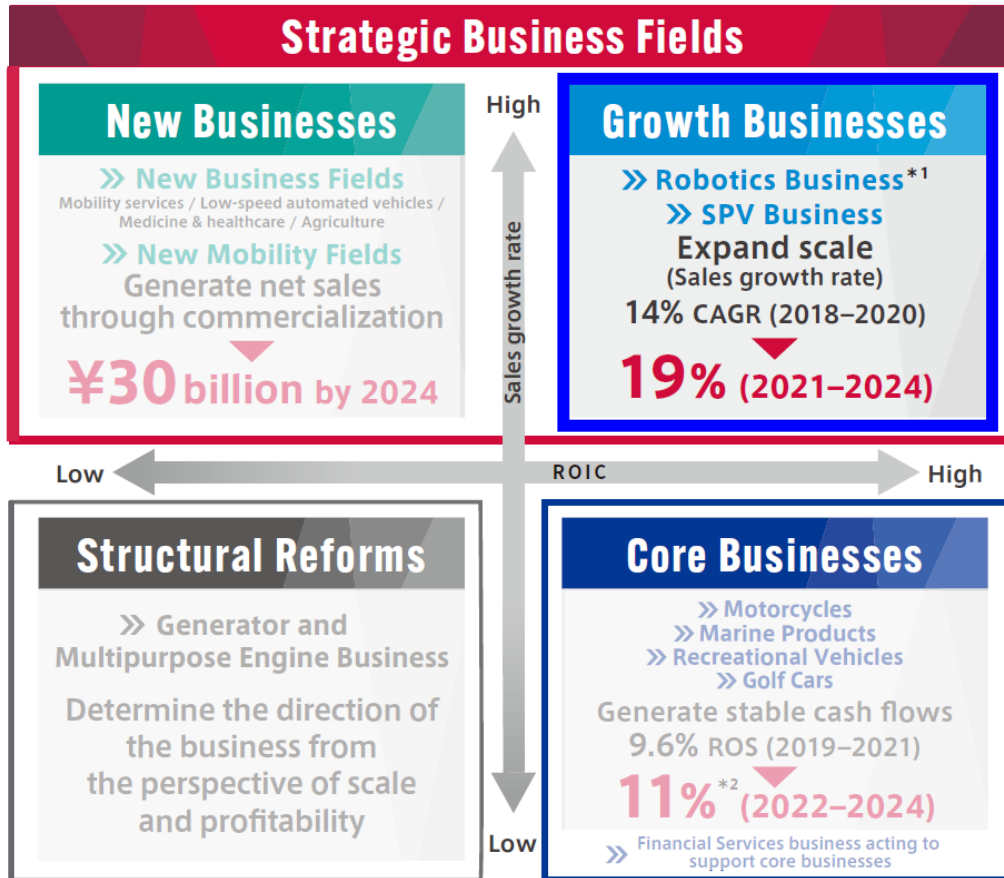
November 30, 2022

## Land Mobility Business Operations: Long-Term Vision for 2030

# Bringing Joy into Mobility and Fun into Holidays Together with Our Stakeholders

- Create unforgettable moments and experiences
- Support our colleagues to foster firm and lasting partnerships
- Coexist with Mother Nature and preserve it for future generations
- Create mobility and services that usher in a new tomorrow

As a growth business, aim to both expand our business scale and maintain a high profit margin



- Growth-focused resource investments, e.g., human capital and growth investments

- Build a highly efficient business structure

Production | Procurement | Development

Collaborate with companywide roles

DX | Foundation-Building | Strategizing

Unify roles within the business unit

# SPV Business Presentation

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Smart Power Vehicle Business Unit  
Land Mobility Business Operations

- 1. SPV Business Overview**
- 2. The Market**
- 3. Our Strategy**
- 4. Medium-Term Strategy**

## **1. SPV Business Overview**

## 2. The Market

## 3. Our Strategy

## 4. Medium-Term Strategy

**Expand the possibilities in people's lives with technologies that put human perceptions first and transform mobility to solve the environmental issues society faces.**

The SPV Business is tasked with leading the way with the "Transforming Mobility" in our Long-Term Vision.



Registered in FY2022 as the world's first commercialized electrically power-assisted bicycle in the National Museum of Nature and Science's Essential Historical Materials for Science and Technology (#00334)

Electrically power-assisted bicycle: Launched in 1993 as a world-first and pioneered the category

Electric wheelchair: Launched in 1995 as a health and welfare product

# Brand Slogan and Value Offered

**“Being with You”** The users are center stage and we are their **stagehands**

## eBike and electric wheelchair market demands



The more indistinguishable it is from a conventional bicycle or wheelchair, the better

The smaller and lighter the power-assist system is, the better

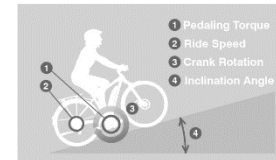


**Inconspicuous looks and quiet performance**

## Yamaha's reputation



Intuitive operation and natural feel and comfort



**Natural assistive feel and reliability**

## All-important drive units

### Yamaha-brand CBU models

↑ The unique points of SPV among Yamaha products ↑



= Human power

+ Electric power assist



e-Kits for OEMs

e-Kits for OEMs  
Yamaha-brand e-Kits

Examples of product applications

## Expands your possibilities

**Performance**  
Challenge more

**Lifestyle**  
Go farther with ease

**Move**  
Faster and easier



Reliability

Marketing Communication



# Core Needs and Draws for SPV Products

— Let's strive for greater happiness —

SPV products amplify people's physical capabilities to help them do more

**Performance**  
**Challenge more**



**Lifestyle**  
**Go farther  
with ease**



**Move**  
**Faster and easier**



1. SPV Business Overview

**2. The Market**

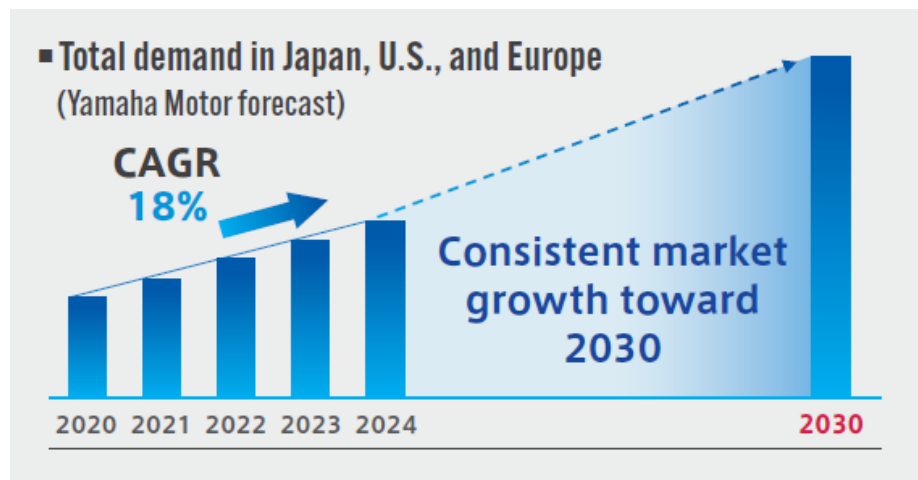
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# The Market

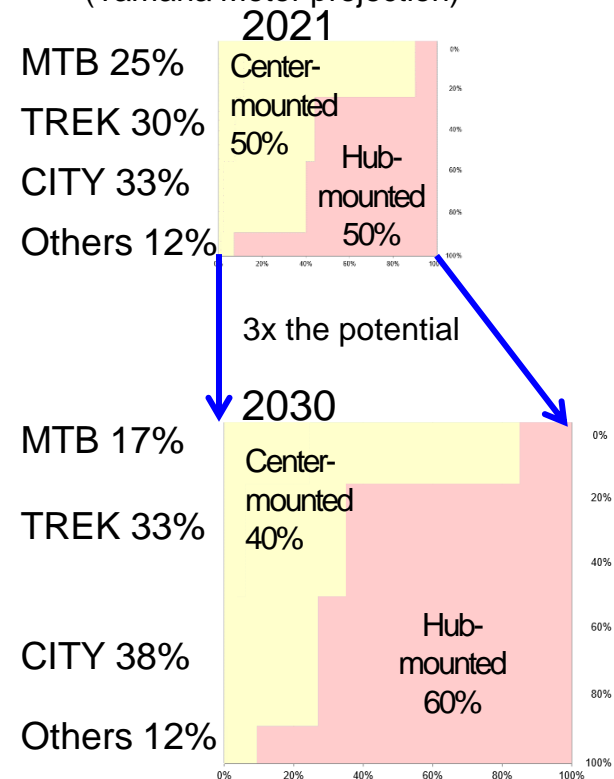
## Market Scale and Growth Potential by Region/Category

Electrically power-assisted bicycle market demand has materialized and growth continues to be steady in Europe, the U.S., and Japan. Demand is expected to be further encouraged by rising day-to-day eBike use, hobbyists, alternatives to cars in urban/suburban areas, the development of infrastructure (bicycle paths) driven by policies such as restrictions on cars from entering urban centers as part of the European Green Deal.



From Medium-Term Management Plan announced Feb. 2022

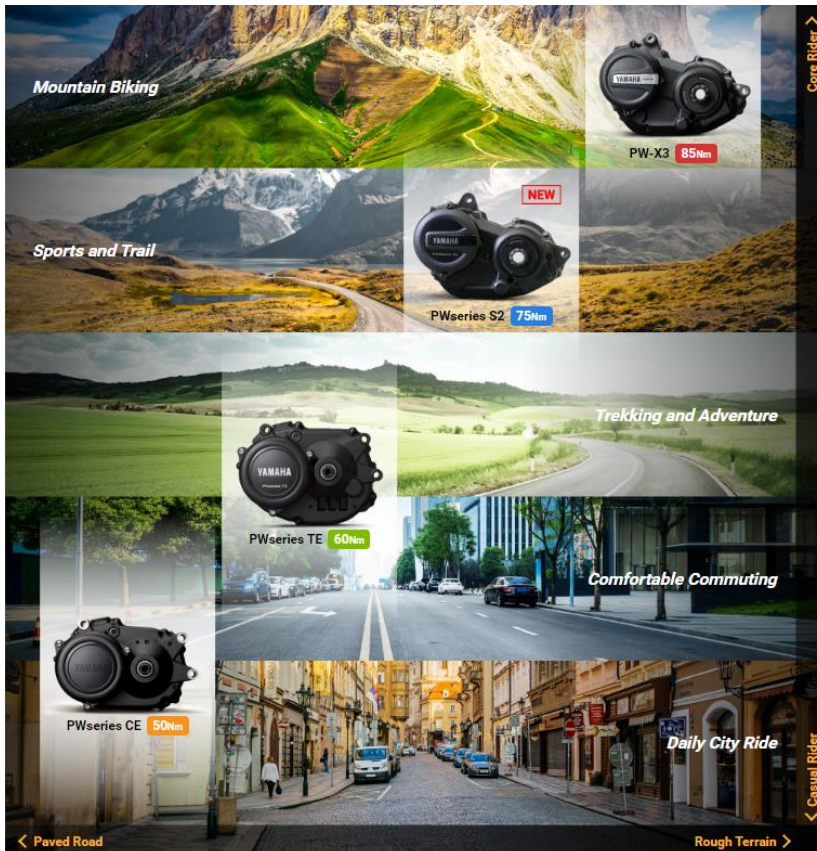
Changes in European market composition  
(Yamaha Motor projection)



## Market Scale and Growth Potential by Region/Category: Yamaha lineup (sample)

OEM supply of eBike drive units (B2B)

Complete Yamaha-brand eBikes (B2C)



■ Mountain



¥600,000-

■ Gravel



¥400,000-

■ Cross



¥300,000-



¥100,000-

For the Japanese market

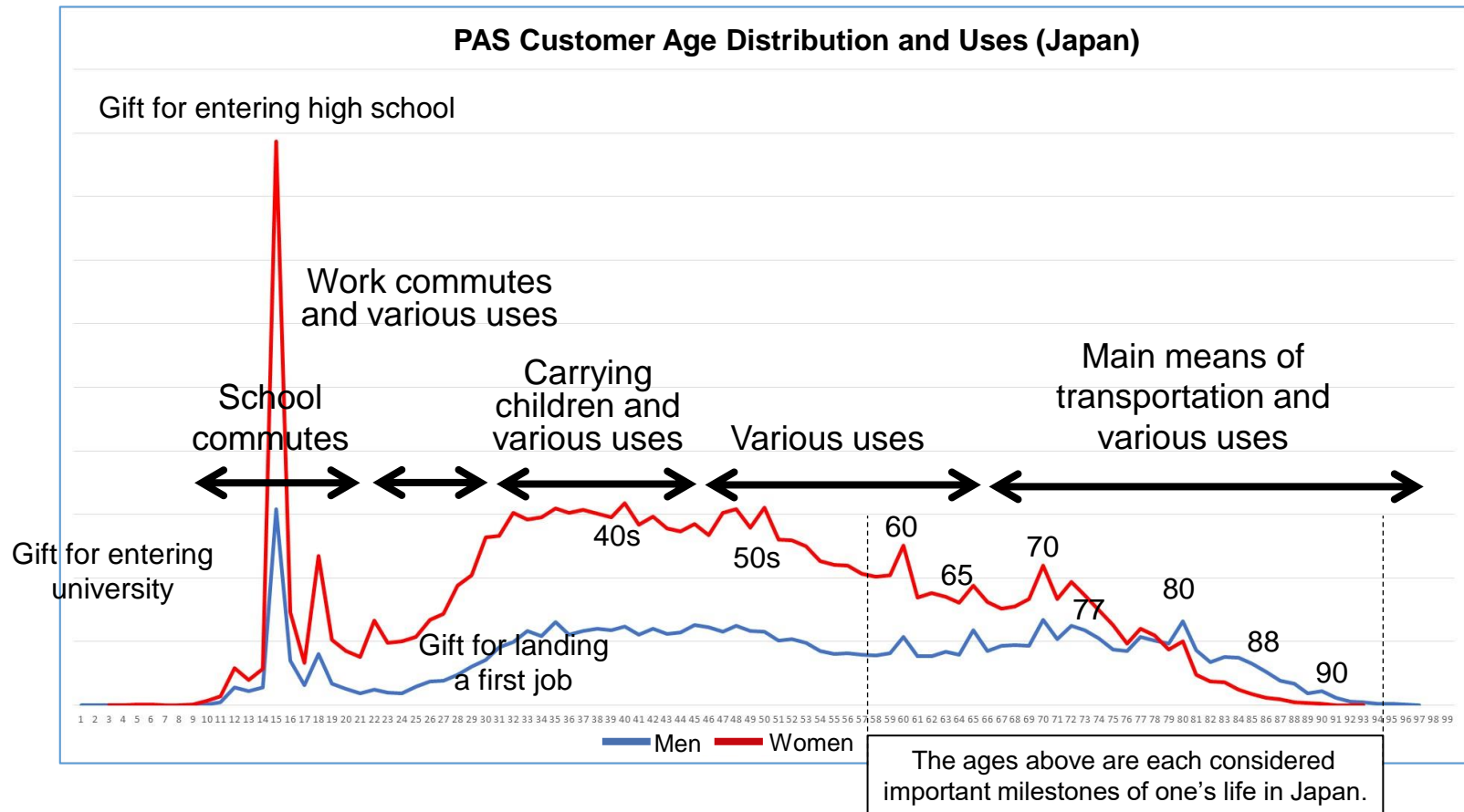


PA drive unit (100 Nm)

For the Japanese market

## Customer Age Demographic Students to Seniors

SPV products are the gateway to experiencing a wide variety of other Yamaha products or before trying another SPV product, making seamless proposals possible.



## Market Scale and Growth Potential by Region/Category: Yamaha lineup (sample)

Electric wheelchair drive units (B2B)

Electric wheelchairs (B2C/B2B)

### ■ Electric types (joystick): Mainly used domestically

JW: Joy Wheel



¥300,000-



¥400,000-

### ■ Electrically power-assisted types: Mainly used internationally



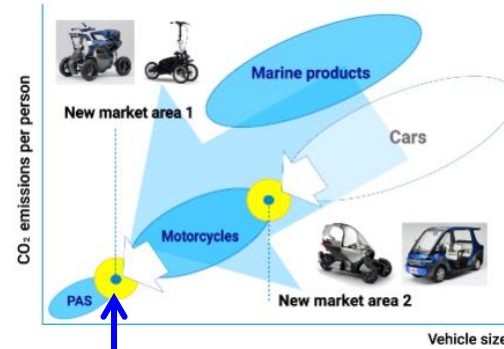
¥300,000-



## Challenging New Market Areas

From CO<sub>2</sub> reduction strategy in the Yamaha Motor Group Environmental Plan 2050

### Utilization of compact mobility vehicles



Pedestrians

Bicycles

New market area 1

Motorcycles

Existing SPV offerings

New products

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## Product Strategy: Natural Progression

👉 Calling on our 30-year track record of quality and reliability

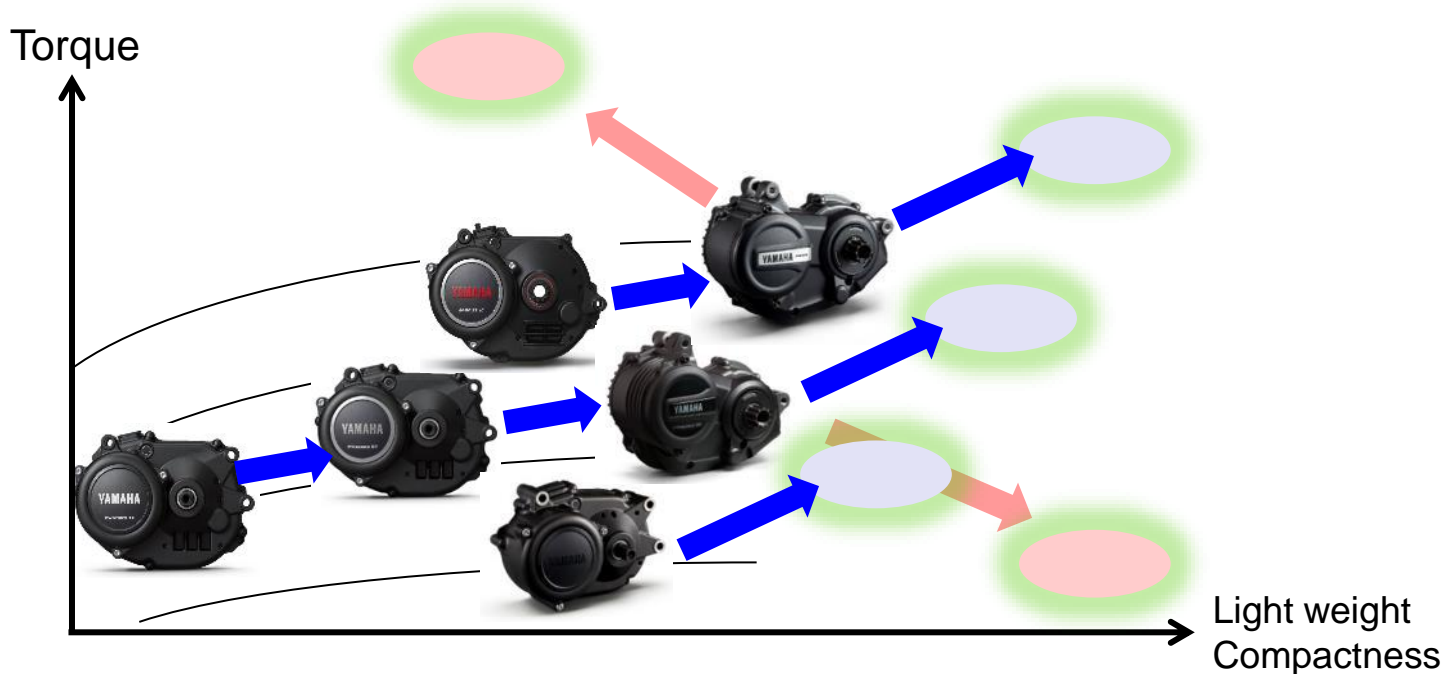
Yamaha's electrically power-assisted products are praised for and superior in performance to competing offerings in these respects:

- Intuitive operation and natural feel and comfort
- High reliability

Based on these, we pursue the demand trends for inconspicuous looks and quiet performance and bring advances in terms of:

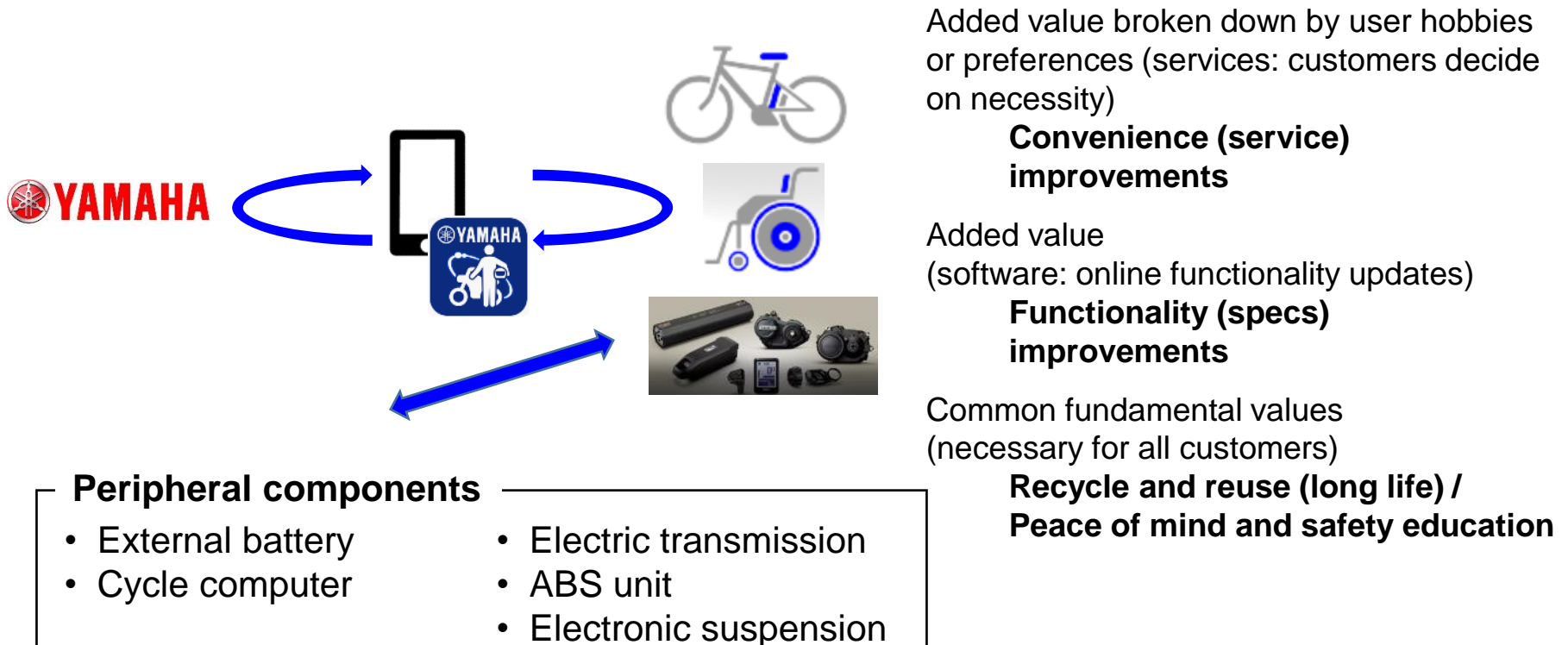
- Lightness
- Compactness
- Power

Further, we will differentiate our products in each segment as required by offering options for customization.



## Product Strategy: Connectivity

We will update the functionality and value of both our electrically power-assisted bicycles and electric wheelchairs by evolving products themselves (hardware/software) and services offered. The software in particular can be updated through post-purchase downloads. For services as well, we can offer other value through connectivity, ranging from the fundamental values of peace of mind and safety to ones for more segmented, hobby-focused needs. We will start by carefully identifying the fundamental values customers will want to “connect” to via PoC.



# Our Strategy

Cross-Functionality: Constant improvements yielding B2B and B2C synergy

- ☞ Use our e-Kits (OEM brands) and CBUs (Yamaha-brand) to bring mutual benefits

We will improve the current state of our 3S (Sales, Service, Spare parts) functions and our *Monozukuri* by melding and overlapping them with the knowledge we have gained in each of our B2B and B2C markets.



## Cross-Functionality: Create New Applications

☞ Contribute to work efficiency and laborsavings

As we aim for the natural progression of our electrically power-assisted bicycles and electric wheelchairs, develop new applications, i.e., ones outside of the original framework of the SPV business and its products, that leverage **the unique versatility advantages of small-scale e-mobility.**



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**Assisting human hands to contribute to work efficiency and laborsavings**

At factories



=

Exhibited models at iREX2022



×

When firefighting



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This hose layer uses a PAS drive unit and assists on-site efficiency and laborsavings (built by Yamaha Motor Engineering Co., Ltd.)

## Cross-Functionality: Create New Value

👉 Create originality that goes beyond industry boundaries

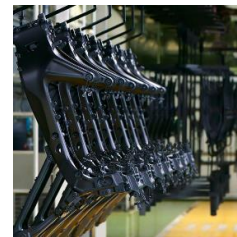
As we aim for the natural progression of our electrically power-assisted bicycles and electric wheelchairs, we will also engage in new value creation by **crossbreeding uniquely Yamaha Motor assets**.

### Natural progress of the SPV Business



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### Know-how from our core businesses



Functions, technology development, procurement/manufacturing, marketing, services, business style, etc.

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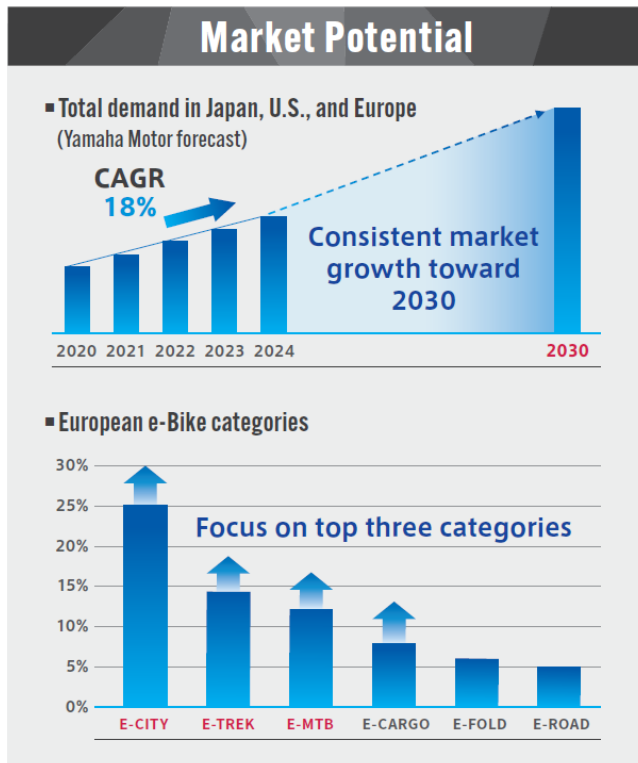
# Medium-Term Strategy

We will supply both complete Yamaha-brand electrically power-assisted bicycles and electric wheelchairs as well as products for OEMs (drive units, etc.). We will strive to answer the needs of the Yamaha brand as well as those of our OEM clients.

## Strategic Business Fields: SPV (Growth Businesses)



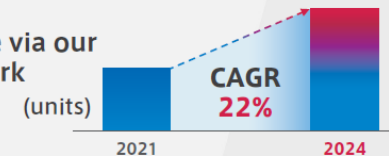
Expanding market + Customized e-Kits and new Yamaha-brand models → Expand scale and double net sales



### Scale Expansion Exceeding Market Growth

Acquisition of new overseas e-Kit\*<sup>1</sup> customers

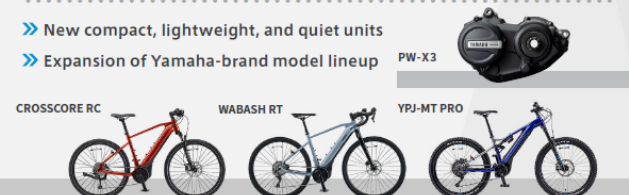
- » e-Kit customization and co-development
- » Drive unit production in the largest market (Europe)
- » Direct service via our dealer network (Europe)



### Doubling Net Sales

Double sales by introducing high-value-added e-Kits + mid- and high-range models

- » New compact, lightweight, and quiet units
- » Expansion of Yamaha-brand model lineup



1: e-Bike Systems (Yamaha Motor e-bike drive units and peripheral components)  
 Note: European e-Bike categories based on Shimano's State of the Nation Report 2021

## ▶▶ e-Kit Customization and Co-Development

☞ Emboldening OEM clients to pursue their uniqueness

In addition to offering ready-made models, we strive to give OEM brands the best options and will take on requests for customization\* of drive units (exclusive or joint development) to provide even more fine-tuned performance that delivers smooth starts at the pedal and powerful assistive force.

\*Creating the output motor characteristics OEM desire with precise electronic control

## ▶▶ Dealer Direct Service

☞ **Yamaha eBike Systems Service (YeSS)**

In Europe, the largest market for electrically power-assisted bicycles, we have long been receiving requests from our OEM clients to provide dealer direct services, in which Yamaha responds directly to service inquiries from client sales channels and handle processing. We will roll this out starting with clients and regions that have made firm requests. We are currently aligning our respective IT infrastructures in preparation.

■ Technical Support ■ Warranty ■ Spare Parts ■ Training

Calling on 30 years of experience in the eBike business and almost 60 years in the mobility business in Europe alone, we will roll out fast and effective support for the four key services above in each region and country.



## ▶▶ Drive Unit Production in Europe

☞ Accelerate our carbon-neutral efforts

Europe is the largest market for electrically power-assisted bicycles and the demands for carbon neutrality are set to rise even further, so we are aiming to contribute by transferring the SCM process to the prime region of consumption. This is to leverage the company's existing assets with the growing momentum behind the transition to e-mobility.



## ▶▶ Production of Hub-Mounted Drive Units in India

☞ Increasing the overall strength of the business  
in anticipation of global market growth

Hero Cycles is the largest bicycle manufacturer in India, part of the HMC Group, and hungry for global expansion. We have partnered with them and are constructing a factory for hub-motor manufacturing at Hero E-Cycle Valley located in northwestern India. In addition to center-mounted drive units, we are working to expand the lineup of drive units to meet a wide range of demand.

## ▶▶ Overseas Development of CBU Models

### 👉 YAMAHA SWITCH ON (Europe)

Europe is showing the biggest momentum in terms of shifting to e-mobility and it is the biggest market for eBikes, so we plan to introduce complete Yamaha-brand offerings there.

Going forward, if there are areas exhibiting demand, we will endeavor to answer customer expectations as well as the needs of society, whether it is with our OEM e-Kit business, our own branded products, or both.



