

We are in charge of the future of the earth

Introducing mobile business considering the environment
We aim changing the world

Introduction

《The Revolution of motor cars from engine to EV(Electric Vehicle)》

Along with the development of civilization, people have evolved the means of travel from manpower to a carriage and a motor car.

Especially, in 200 years after the industrial revolution, the spread of motorization according to the invention of the internal combustion engine, We gave immense benefits to the improvement of our living culture. However, the invention (engine) also contained a major harmful effect called "environmental destruction".

《The future of electric motor cars》

More than 3 billion units of conventional power vehicles worldwide are produced, including land, sea and air. Within 10 years, it is expected that over 300 million of that 10% will be replaced by EV powered vehicles.

The market size of 300 million units is more than 100 trillion yen.

This huge market will be newly created. For example, a large company with a Toyota Motor class has a strong impact so that it can appear several times. It can be said that it is one "industrial revolution".

This revolution has significance, surpassing any revolution so far.

《What exactly is sought》

Even in the future society, it is technological innovation where we are "viable".

It is a development that secured a safe environment.

AAR develops the environment of a viable future society by developing and spreading in the field of EV vehicles and strives to develop social-friendly technology to people.

With the EV car, we will create a means of people's movement tomorrow.

Scheduled
release
on January
2019

New EV bike dev

Cappy NV



Corporate philosophy

We would like to be a company that thinks about the environment of the next generation world

- **For tomorrow**
- **Consider tomorrow**
- **And make tomorrow**

Above is our philosophy

□ Our slogan

Companies running comfortably tomorrow

□ What we wish for

We do not consider "electricity making, transmitting and using"
We are promoting business with the idea that "electricity is made, stored
used".

The time will come when the transmission lines are stretched all over the
country and the transmission line becomes useless longer.

"Load the stored electricity for each individual, use that energy to drive the
motor and move the thing. "

We will make an era where such products can be utilized.

What is indispensable in the coming new era is the energy revolution.

The evolution of electric storage devices that store the energy and motors
create a new modern society.

New EV bike devut

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Trends in the bike market

From gasoline engine to EV
Why EV?

<Background of development> Trends of world bike market 1

Current status, trends and issues of the motorcycle / motorcycle industry

History of motorcycle industry

The motorcycle industry was formed by intense competition by many motorcycle manufacturers from the postwar period to the high economic growth period. Worldwide motorcycle production volume increased sharply in the 1960s and exceeded 10 million units per year in 1974.

Although it is somewhat stagnant in the 1980s, as the economic development of China, India and Southeast Asian countries since entering the 1990s showed a growing aspect again and reached 20 million units in 1995, in 2003 it exceeded 30 million units, and in recent years it has become around 50 million units.

For nearly half a century the production volume has expanded nearly five times.

Today, the top of motorcycle production volume has moved to India and China, but there is no doubt that Japan's motorcycle maker has been the driving force behind the motorcycle industry, as of 2015 years, the share of Japanese manufacturer boasts a high ratio of about 45%.

Japan

In Japan, there are four oligopolistic states by the company.

The domestic production volume has decreased to about 10% of the peak in 1982.

- Honda: World premier. Boasting a high share in the world around the world, mainly in Asia
- Yamaha Motor: 2nd in the world. Account for 90% of overseas sales
- Suzuki: Many models are unique in both design and performance
- Kawasaki Heavy Industries: Strength in small and medium sports models

China

Both motorcycle demand and production volume has been declining for a long time since 2011

- Jiangmen City Daejeon Group: China's largest
- Ronsin Motor: Partners with Kawasaki Heavy Industries
- Lamb - Honda Rikyu: a joint venture with Honda

The West

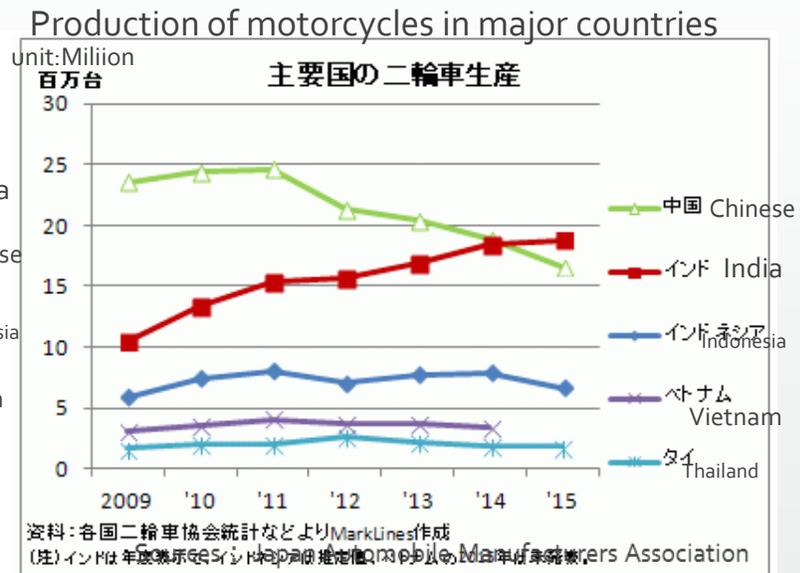
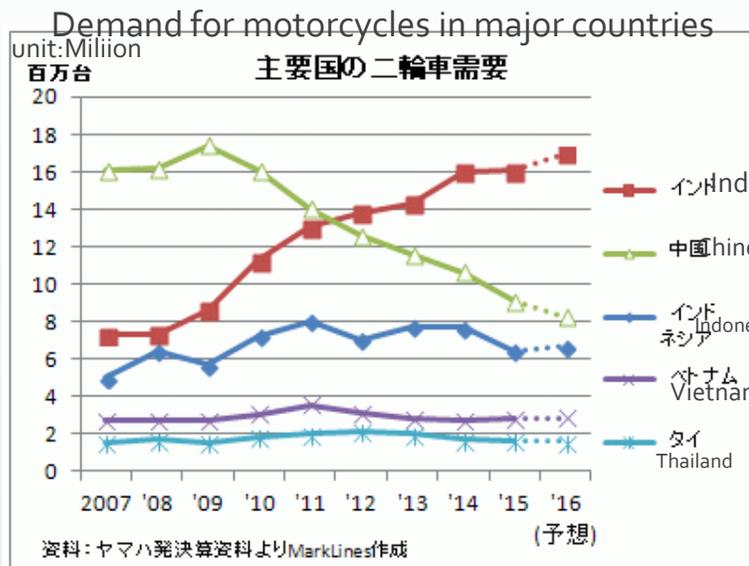
- Harley Davidson (US): Center for large models at high price
- BMW (Germany): High-priced model center. Strength in performance and ease of riding
- Ducati (Italy): Volkswagen (Germany) giant invested

India

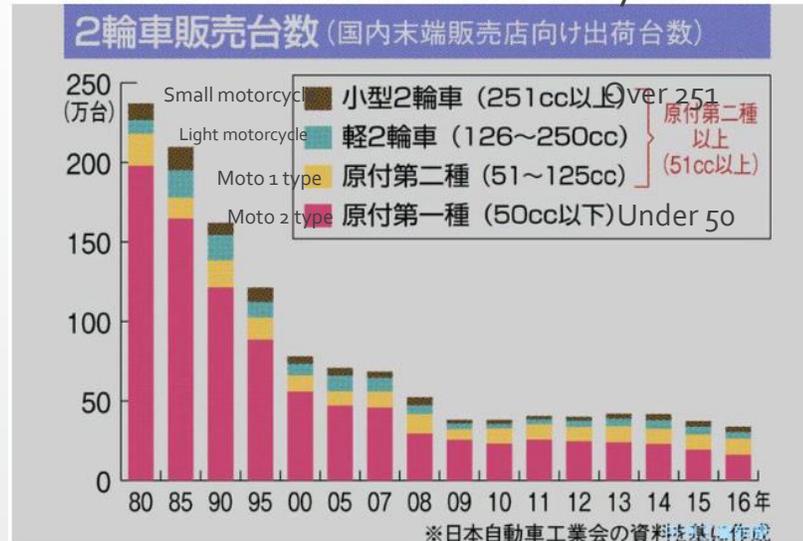
In 2014, surpassed China by production volume, becoming the world's top.

- Hero · motocoop: India's biggest player. In 2011 years collaboration with Honda was resolved to your own route
- TVS motor: partnered with BMW in 2013 years
- Bajaj Auto: Honda loses to fourth place in share

<Background of development> Trends of world bike market 2



Domestic unit sales of motorcycles



Sources : Japan Automobile Manufacturers Association

Negative factors of production and sales of motorcycles that will continue to increase

- ◇ Increase in motorcycle price for adapting to environmental standards
- ◇ Motorcycle parking space is small
- ◇ High-speed charges are high (Japan)
- ◇ Criteria for wearing helmets
- ◇ CO2 Bad environment in summer due to global warming
- ◇ Lack of marketing by leading manufacturers who enlighten the enjoyment of motorcycle driving



EV conversion is progressing rapidly

Why electric bicycles?

In contemporary society, improvement is progressing rapidly for environmental improvement in all fields. In the process, infrastructure, products and services that create new value through innovative technology are born. Among them, the electric vehicle revolution will attract attention in recent years.

In the EV 4 wheel, Tesla Motors of the United States and other electronics and IT companies worldwide are entering full scale, Many leading private makers are also developing business in China.

On the other hand, the EV two-wheel vehicle is currently lagging far behind the four wheels.

According to a trial calculation, the world market for EV vehicles will be 500 million in 4 wheels by 2030 and 150 million in two wheels. It is likely to become a huge market. Promising markets such as India, Taiwan, Vietnam, North and South America are crowded.

Turning our eyes to Japan, the tailwind of the development of EV 2 wheel vehicles that can be said once in 100 years has blown.

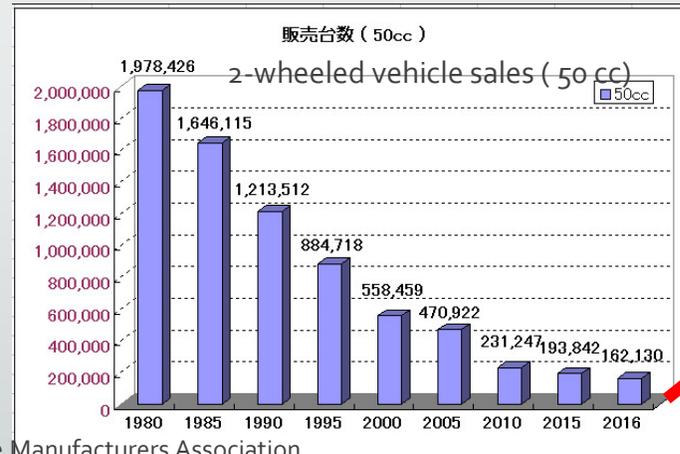
Why? Because it is impossible for moped motorbikes to maintain cheap prices after 2020 due to Emission regulation on a global scale **EURO5**.

That is to say “ 50cc gasoline moped bikes are sequentially discontinued ”

The figure below shows sales of domestic petrol bike (50 cc in total) every fiscal year. The EV motorcycle market will rapidly expand from 2020.

AAR will be leading the EV motorbike market as quickly as possible.

<Number of shipments for end-of-life dealers in Japan>



EV motorcycle market rapidly expanded ! !

Sources : Japan Automobile Manufacturers Association

History of AAR <product line-up>

As a pioneer of EV

Development history

AAR's evolution is the evolution of electric motorcycles.

2018年

2019年

2017年

Electric trolley sales started



New model sales of electric trolleys



Cappy NV《キャビーヌーボ》



2016年

Expanded to Ho Chi Min plant (Vietnam)



Opening exhibition hall



EV senior scooter sales started



VALO《ヴァロ》



2014年

Kanagawa Nadeshiko Brand Certification



2013年

Cappy Release



Overseas development project start

2015年

Bycle Release



Product Introduction In-house developed product

VALO Medium speed EV scooter -VALO series -

※World's first! Overwhelming power not to beat gasoline engine cars! !

Scheduled
release
on January
2019



Main features

1. EV but high power!
2. We can also load heavy luggage
3. Because it is high power safe even on slopes!
4. Drivable with Mortgage type 1 license
5. EV So ultra low fuel consumption!
*About 1/7 of gasoline car
6. Ultra quiet sound as it is a motor!
(Need not mind early morning midnight)

《Product Specifications》

Application:	For business use
Hourly speed:	maximum speed of 80 Km
Full charge Mileage:	100 Km (when running on flat)
Motor:	maximum 2500 W (rated 600 W)
Battery:	lithium battery 72 V 45 Ah
Battery charging time:	Usually 8 hours fast charger 3 hours
Maximum climb:	angle of 20 degrees

Domestic registration
type in Japan: Moped type I species

Cappy NV Medium speed EV scooter -Cappy nv series -

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Main features

1. EV but high power!
2. Huge Met-in storage!
3. Because it is high power safe even on slopes!
4. Drivable with Mortgage type 1 license
5. EV So ultra low fuel consumption!
*About 1/7 of gasoline car
6. Ultra quiet sound as it is a motor!
(Need not mind early morning midnight)

《Product Specifications》

Application:	For general use
Hourly speed:	maximum speed of 70 Km
Full charge Mileage:	80 Km (when running on flat)
Motor:	maximum 2000 W (rated 600 W)
Battery:	lithium battery 72 V 30 Ah
Battery charging time:	Usually 7hours fast charger 2 hours
Maximum climb:	angle of 18 degrees

Domestic registration
type in Japan: Moped type I species

Opinions of experts in each industry 【Review】

Reason why major manufacturers can not

To expect from EV. Why AAR?

Mr. A concerning environmental energy

Major bicycle makers are reluctant about EV.
There is a history of the gasoline engine built up to now, Agencies and employees also have quite a few.
Toyota set a policy to leave gasoline engine in the form of a hybrid.
Now, Dyson gives a name as an electric car maker
In circumstances where it is trying to be said, Toyota can not compete with the current situation.
Therefore, major bike makers are on the same trend,
The number of parts can be reduced, and the market which requires less know-how.
It is expected that it will change, in a sense companies with knowledge of electric motors are in an environment where they can take big markets.

Mr. B online mail order relation

When we move to EV, we believe that mail order companies are a big opportunity.
If it is a gasoline engine so far, it was limited to selling at a specialty shop but it will be possible to deliver by courier, which will be a big business opportunity.

Mr.C home Delivery Relationship

Migrating to EV will result in significant cost savings.
In addition, it is thought that the complaint of the noise at the time of delivery also disappears.
Not only for us but also for newspaper delivery and postal delivery considered to be a big merit.

Why AAR?

Because it is a future company. It will be an industry with opportunities for companies of various business types to enter.
There is no know-how, but a company with sales power. A dealer of a big bike maker. A company you want to manufacture with OEM. Overseas EV makers in the Japanese market against strict regulations etc. . . .
AAR is the only company that can meet that need.

Company Profile

A dream come true

Toward realization of dreams



Only AAR can...Appearance of EV in the near future

Since EV is a mobile using the same electricity, it has high affinity with smartphones, so it is possible to interlock in many situations.

Until now, we think that the days when realization that was the imagination area is realized is close.

We think that it is only AAR that makes it possible.

Company Profile

Company Profile

Corporate name: Earl Co., Ltd. English name: AAR Co., Ltd

Business description:

- ① Manufacture, import and export business of EV powered cars and overseas sales
- ② Import and export of energy and ecology products and parts planning, development, manufacture and sale
- ③ Development, manufacture and sale of battery pack
- ④ Construction and operation of charging station, charging station
- ⑤ Operation of Internet commerce

Establishment: August 16, 2012

Capital: 56,250,000 yen

Representative: Representative Director and President
Takashi Fukuda

Headquarters: Mita 2-7-10 Meguro-ku, Tokyo Central Building 1F

Holding patent: Using permanent magnet type DC motor
Wheel drive unit for electric vehicle
(No.2001-157314)

Affiliated company: Earl Focco Tianjin Technology Co., Ltd.
(Tianjin, China)

Earl Japan Co., Ltd.

History

August 2012 Established Bays International Co., Ltd.

September 2015 Head office moved to headquarters in Meguro-ku, Tokyo
Start overseas development project of EV motorcycle

January 2016 Company name changed to "Earl Co., Ltd."

April Ho Chi Minh factory contract in Vietnam
Acquisition of domestic manufacturing / assembly license in Vietnam

September Earl Fukoku Tianjin Technology Co., Ltd. established

October Capital increased to 45 million

November Earl Japan Co., Ltd. established
EV Assist Trolley Project Start

March 2017 EV assist truck prototype completed

Capital increased to 56.25 million

April EV assist trolley trial started

November Start of development of a new EV assist trolley

February 2018 Completion of prototype car for new EV assist truck

April Development of the middle-speed
EV scooter started

June Launch development of a new EV assist trolley
(smart deck)

Guidance for partner recruitment

We wish to partner with companies that think about
realizing dreams together