# **Relationships with Customers and Suppliers**



# Strategy



- Our existing products stop meeting requirements as customer or global quality standards change.
- We lose trust as product defects increase due to quality management issues in manufacturing processes.
- Customer satisfaction falls due to supply chain fragility between us and suppliers that leads to quality deficiencies in components and supply delays that impact product quality.



- Review quality management standards and establish stricter quality assurance systems.
- Perform regular quality audits for product manufacturing processes and maintain and monitor quality assurance system.
- Optimize quality standards with suppliers and strengthen collaboration to maintain and improve component quality.



- Win new customers and raise brand value by providing high-quality products sought by markets.
- Differentiate ourselves from rivals by establishing the company as a quality leader within the industry.
- Fulfill our corporate social responsibility by developing eco-friendly products and sustainable supply chains.

## **Indicators and Targets**

Prioritized theme Provide products and solutions that support a sustainable society

Medium- to long-term target		FY2023 result
Alongside various partners, develop and provide products and solutions that can make a contribution in various situations, including realizing the smart cities of the future.	■ Smart Infrastructure	Begin new product sample shipments of Ni-MH batteries Pursue new lithium battery product development Undertake internal performance assessments of next-generation batteries
	■ Smart Home & Office	Begin new product sample shipments of Ni-MH batteries Pursue new product development of alkaline, lithium, and next-generation batteries Begin mass production of new products in the electronics business
	■ Smart Retail Store	Begin mass production of new Ni-MH battery products Pursue new product development of lithium and next-generation batteries
	■ Smart Factory & Mobility	Begin mass production of new Ni-MH battery products Pursue new product development in electronic devices business and next- generation batteries

Our offerings enable reliable applications for clean and safe electric energy to corporate and individual users that support society and people's lifestyles.

### **Basic Concept**

The FDK Group strives to build product development, supply, and quality assurance systems that help resolve social issues, and we work to promote green procurement based on concepts for continually developing and supplying high-quality, safe, environmentally friendly batteries and electronic devices able to satisfy customers.

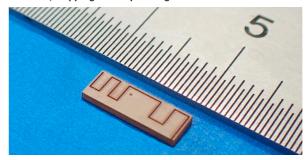
#### **Examples of Initiatives**

#### **FDK Group Initiatives**

The FDK Group strives to provide batteries and electronic devices that use environmentally friendly materials by complying with environmental laws and regulations to heighten our value as a company cultivating the future. As part of these measures, the FDK Group works to develop new products, including a next generation of batteries able to provide customers with new added value derived from the distinct technology cultivated in the battery and electronic device businesses thus far.

#### Examples of New Product Launches (As of April 2024)

Commercialization of world's smallest Bluetooth® Low Energy modules, shipping of samples begins



FDK and Toshiba Corporation have signed a technology licensing agreement for the world's smallest Bluetooth® Low Energy modules, developed by Toshiba using proprietary SASP™ (Slot Antenna on Shielded Package) technology. Under this agreement, FDK has developed the HY0020 and HY0021 models and started shipping samples to certain domestic customers from October 2023 for HY0020 and July 2024 for

The concept behind these modules (HY0020 and HY0021) is to pack the components necessary for Bluetooth communications into one of the world's smallest volumes, making it easier to develop ultra-compact devices that can be installed in all kinds of locations. They will then contribute to the development of even smaller devices for wearable applications, healthcare applications, tracking, clothing, and compact electronic devices.

 $^{\ast}$  The SASPTM word mark is a trademark of Toshiba Corporation.

## Confirming long-term durability improvements for nickel zinc batteries



FDK is currently conducting long-term evaluation trials on nickel zinc batteries, samples of which have already begun shipping. In chargedischarge cycle testing, which assesses suitability for drive motor power supply applications, the batteries retained about 70% capacity after 800 cycles. In continuous charging tests to assess replacing lead-acid batteries in backup power supply applications, the batteries maintained capacity after approximately one year. These tests confirmed that the batteries have sufficient durability for commercial applications. The batteries are lighter than lead-acid batteries and have a reduced environmental impact. They can be recharged in a similar way to lead-acid batteries, making it relatively easy to use them as replacements for leadacid batteries.

Going forward, we will continue to work toward mass production and shipping, by bolstering our equipment and expanding shipments of samples to customers while taking into account the results of customer evaluation testing and other feedback.

## Developing long-life "HR-AATEZ" Ni-MH batteries for the in-vehicle accessory market

At FDK, we have added the new "HR-AATEZ" Ni-MH batteries to our product lineup and launched mass production and shipping.

In-vehicle application market needs are becoming increasingly diverse year by year, and demand is growing for better discharge performance and longer

life in low-temperature environments. In response, FDK has been increasing capacities and adopted nickel hydroxide, hydrogen-absorbing alloys, electrolytes, outer canisters and other materials that further improve the durability of long-life models. The result is a battery life about double that of previous long-life models. Improving battery life in this way reduces replacement frequency, and going forward we will continue working to improve convenience for our customers.

# **Relationships with Customers and Suppliers**

#### FY2023 Achievements

#### Ni-MH batteries

We have pursued development of high-durability batteries for the social infrastructure and mass production of high-capacity batteries for power backup applications.

In September 2023, we reached cumulative production of 5 billion cells, and we continue to produce highly recyclable and rechargeable batteries as we aim for our next target of six billion cells.

#### Alkaline batteries

We sold products with improved performance in order to meet market needs.

In addition, we actively pursued use of rail transport for product shipping to promote eco-friendly distribution and developed new packaging formats to reduce the environmental impact (reduced plastic use).

#### Lithium batteries

We are working to develop new products to serve the market for nextgeneration smart meters for the carbon-neutral era.

We also installed solar panels on the roof of our Tottori Plant (Tottori Prefecture), which produces lithium batteries. The panels went into operation in 2024. We continue to promote energy savings throughout all our factories.

#### Electronic devices business

We improved production stability and product yields to reduce procured materials and waste.

In October 2023, we completed commercialization of the world's smallest Bluetooth® Low Energy module and began shipping samples. We expect the modules to be used in trackers in medical settings and for children, the elderly, and pets, in sensors to improve factory and farming efficiency, and other applications.

#### All-solid-state batteries

In order to meet a wider range of applications, we are working to improve durability in harsh environmental conditions and to develop new materials and processes for the next generation.

In addition, we are preparing to meet a variety of market needs, such as by working with the Electronic Devices Business Division to develop modules with built-in charging circuits.

#### Research and development

We are developing nickel zinc batteries and conducting trials to determine if their durability meets commercial needs when using them to replace lead-acid batteries in backup power sources. We are expanding shipping of samples. Our nickel zinc batteries are lighter than lead-acid batteries and do not use hazardous substances such as lead. They have a low environmental impact, and the use of aqueous electrolyte makes them especially safe with a low flammability risk.

# Quality Assurance Activities

# Development and Quality Assurance of Products with Considerations for Quality and Safety

## **FDK Group Quality Policy**

"We will provide customers with quality they can rely on."

#### Philosophy

Our mission is to contribute to society by developing and supplying highquality, safe, and environmentally friendly products that satisfy customers through a basic quality-first approach. The FDK Group knows it must never cause any grave quality issues nor violate the laws or regulations of each country worldwide.

Therefore, every department takes customer-oriented actions throughout each step, from sales to research, planning, development, design, production and even customer service, to provide more thorough quality management.

#### **Quality Action Guidelines**

- 1. We will make quality requests from customers our highest priority and take swift pertinent action to heighten customer satisfaction.
- 2. We will strengthen fundamental activities in the development stage and incorporate quality, price, delivery, and environmental considerations into production to help prevent quality issues at the production stage, improve profitability, strictly adhere to delivery dates, and improve environmental performance.
- 3. We will continually enhance risk management throughout various aspects of compliance from product safety to the chemical substances contained in products.

- We will improve manufacturing to thoroughly reduce any loss of quality, such as process waste and losses from complaints.
- 5. We will continually improve the quality management system to execute more effective quality management.

#### **Quality Assurance System**

The FDK Group has built a quality management system to achieve the Quality Policy and Quality Action Guidelines and will always undertake quality assurance activities. As of March 2024, nine of our sites, including those overseas, have acquired ISO 9001 certification, and four have acquired IATF 16949 certification.



### **Quality Assurance Initiatives**

In order to provide quality products and services that satisfy the function and performance requirements as well as other customer needs, FDK fosters cooperation between management and other various departments. This necessitates the participation of every employee in activities across every process of its corporate activities. The FDK Group engages in collaborative activities linked to quality assurance activities of each business site, including those overseas, across a diverse product line-up.

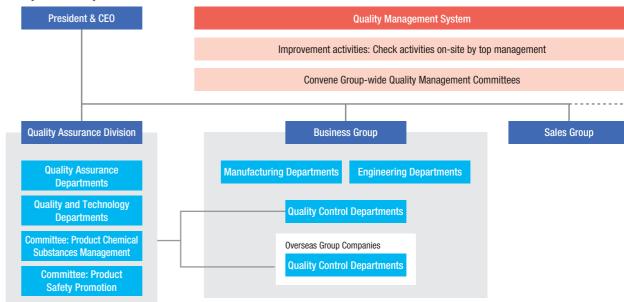
Quality Assurance Division actively works to share information with all business divisions to drive these activities, formulate quality proposals, escalate responses in the event of problems and quality issues related to compliance, conduct education to nurture human resources, and horizontally share other information such as expertise and examples of defects. We are also adopting a management-side approach, such as by establishing Group-wide Quality Management Committees under the supervision of senior management, and by having senior management personnel confirm improvement activities at work sites.

# Improvement Processes of Actions to Strengthen Quality

- In order to implement the FDK Group's quality policy, each verification process, from product planning to mass production, is reviewed in accordance with quality-related regulations, etc., drawing on a wide range of knowledge not only from the department itself but also from other related departments, thereby ensuring more objective assessment.
- 2. Green procurement initiatives

The FDK Group contributes to the materialization of a sustainable society by conducting business activities that consider the environmental burden and supply environmentally friendly products. The FDK Group provides environmentally friendly products to customers by procuring and using eco-friendly materials based on the FDK Group Green Procurement Standards.

## Quality Assurance System



### Chart of Each Quality Assurance Verification Process

