In order to achieve "an ideal society with affluence both in matter and mind," Panasonic will make the most of the management resources entrusted to us by society and work on enhancing competitiveness in terms of both strategy and operational capability under the Basic Business Philosophy of the Panasonic Group. We will then return the profits received as a result of our contributions back to society, to our employees, and to further useful investments. As we continue to pursue this cycle and strengthen our competitiveness, we will further increase our contributions and enhance our corporate value.

**Value Creation Process**

**Ideal society with affluence both in matter and mind**

**Brand Slogan** Live Your Best

**Contribute to solving global environmental issues**

**Panasonic GREEN IMPACT**

- Realization of a carbon-neutral society
- Increased CO2-reduction impact
- Realization of a recycling-oriented society
- Recycling-oriented manufacturing and product longevity

**Support health & well-being of people both in mind & body in “lifestyle” & “workstyle”**

- Well-being in lifestyle: More room in one’s mind and healthier lifestyle
- Well-being in workstyle: Safe, comfortable, and worker-friendly workplace

**Operational Capabilities**

- Long-term perspective: Structural advantage Business model
- Two wheels of competitiveness: Speediness
- Five capabilities toward change (1 through 5)

**Corporate activities based on our Basic Business Philosophy**

1. Response to demand changes
2. Response to production fluctuations
3. Response to changes in needs
4. Ability to turn insights about changes into actual products
5. Response to new materials/technologies

**Strategic investment** (investment for growth areas, investment in technology pillars)

- Panasonic Corporation (Lifestyle) (PC)
- Automotive Systems (PAS)
- Entertainment & Communication (PEAC)
- Housing Solutions (PHS)
- Connect (PCO)
- Industry (PID)
- Energy (PEC)

**Strengthen the management foundation of the Group as a whole**

- Panasonic Holdings (PHD)
- Thorough implementation of Basic Business Philosophy
- Support for enhancing competitiveness
- Support for maximizing the potential of each employee and build-needed platforms
- Selection and concentration beyond operating company’s capability / Investment in growth beyond operating company’s own funds
- Responding effectively to critical risks from Group’s perspective

**Corporate Governance**

**Implementation of Basic Business Philosophy**

- Human Capital
  - Employees: 246 thousand (99 thousand in Japan; 157 thousand overseas)
- Manufactured Capital
  - Property, plant and equipment: 9.715.5 billion
- Intellectual Capital
  - Intangible assets such as technology and know-how: 696.9 billion
  - Number of intellectual property holdings: more than 1,000 thousand
- Brand Capital
  - Brand value: 10.832 billion
  - Global brand ranking: #8
- Natural Capital
  - Annual energy consumption: 4.8 TWh (of which, renewable energy: 2.4 TWh*)
- Financial Capital
  - Parent company shareholders’ equity: ¥9.175.6 billion
  - Interests-bearing debt: ¥1.897.3 billion

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*1 Of the seven operating companies, the five companies whose sales volume accounts for 10% or more of total sales are reported as “segments.”
*2 Figures are as of the end of March 2022.
*3 Figures for Natural Capital are an annual result of FY2022.
*4 Research by Interbrand, a branding specialist.
*5 Figures from photovoltaic, wind, and biomass sources including the amount of renewable energy adopted to manufacturing and non-manufacturing sites of own group. Heat pumps not included.
Overview of Medium- to Long-term Strategy by Reportable Segment

The Panasonic Group has transitioned to an operating company system in which each business operates with a high degree of independence and has reorganized its reportable segments into the following five segments: Lifestyle, Automotive, Connect, Industry, and Energy. Using cumulative operating CF and ROIC as medium-to-long-term management indicators (KGI: key goal indicators), the individual operating companies are working to thoroughly enhance their business competitiveness with the goal of making contributions to society, including in the area of the environment.

For details on medium- to long-term strategy for each operating company, please refer to the “Panasonic Group IR Day 2022” documents. https://holdings.panasonic/global/corporate/investors/presentations/ir-day-2022.html

The formula for calculating the ROIC of each operating company is as follows.

\[
\text{ROIC} = \frac{\text{Net Operating Profit after Taxes} \times (1 - \text{Income Taxes} / \text{Profit before Income Taxes})}{\text{Invested Capital}}
\]

- **Lifestyle (Panasonic Corporation)**

**Becoming an Enterprise with an Overwhelming Presence in Lifestyle**

Panasonic Corporation, aiming to manage from a long-term perspective, has defined a mission and vision as its corporate Purpose. The mission is “Life tech & ideas: For the wellbeing of people, society and the planet,” and the vision is “We are the best partner of your life with human centric technology and innovation.” Under these banners, the company will move forward with its transformation into an enterprise with an overwhelming presence in the Lifestyle area.

The long-term strategy for the year ending March 31, 2031 (fiscal 2031) has identified seven priority businesses from the perspectives of business position (market growth potential) and competitive advantage (industry position and growth drivers): HVAC system, overseas electrical construction materials, energy solutions, CO2 refrigeration system equipment, electrical construction materials in Japan, display cases, and home appliances in Japan. In each of these seven priority businesses, the company aims to achieve the No. 1 or No. 2 market share in the industry by 2030, as the customer’s preferred choice, thereby transforming its business portfolio. And through this business portfolio reforms, the company will halve CO2 emissions in its own value chain and accelerate the impact of its emission reduction contribution to society.

The medium-term strategy for fiscal 2025, which is a stepping stone towards 2030, is focused on strategic resource allocation, such as allocating cash generated mainly through operating cash flows to investment in growth businesses and investment to strengthen operational capabilities. At the same time, as a response to the risk of deterioration in the business environment, such as raw material price hikes and exchange rate fluctuations, the company will promote cost structure reforms such as company-wide procurement review and a review of shipping prices.

Furthermore, with regard to ESG implementation in the current medium term, the company is promoting its GX strategy by appointing a Chief Green Transformation Officer and is building corporate governance with diversified digital business models and strengthening corporate governance by involving outside directors, etc.

*1 Chief Green Transformation Officer    *2 Diversity Equity and Inclusion

**Connect (Panasonic Connect Co., Ltd.)**

**Contributing to Solving Management Issues of B2B Customers through Core and Growth Businesses**

Panasonic Connect Co., Ltd. consists of hardware-based “core businesses” and software-based “growth businesses.” In the core businesses, which have the world’s top market share in products such as mounting machines and in-flight entertainment systems, the company will concentrate on highly profitable business lines and further specialize in hardware. In the growth businesses, including Blue Yonder, the company will promote a shift to SaaS-based business models and strengthen its cloud-based software solutions. The company’s goal is to be a sustainable, highly profitable business entity centered around both core and growth businesses and a unique partner that makes diverse and multi-layered contributions to solving the management issues of customers.

**Industry (Panasonic Industry Co., Ltd.)**

**Focus on Three Areas: Factory Labor-savings, Information & Communication Infrastructure, and Automotive CASE.**

Panasonic Industry Co., Ltd. is focused on three areas where social need is strong and continuous evolution is required: factory labor-saving, information & communication infrastructure, and automotive CASE (Connected, Autonomous, Shared, and Electric). The core businesses with high growth potential and profitability in which the company will concentrate its efforts are FA Solutions, Electronic Materials, EV Relays, and Capacitors. Furthermore, the company aims to improve profitability by growing its core businesses, which accounted for 50% of sales in fiscal 2022, to 70% in fiscal 2031. The company will also promote initiatives towards the environment such as net-zero CO2 emissions (Scope 1 and 2) in fiscal 2031 by reducing its environmental impact from the perspectives of both its own manufacturing and the development and delivery of products for customers.

**Energy (Panasonic Energy Co., Ltd.)**

**Leading/Promoting Both a Sustainable Global Environment and Enriched Lifestyles through Diverse Batteries and Technologies**

Panasonic Energy Co., Ltd. will achieve sustainable growth based on the two pillars of “growth potential” in the automotive business, which is rapidly expanding due to the progress of electrification, and “profitability” in the industrial and consumer businesses, which support social infrastructure and are expected to experience stable demand. The company will also maximize its contribution to society through the environmental contribution activities of these businesses.

In the automotive sector, the company will focus on the North American market, where it has a strong business foundation, and promote business growth by commercializing its next battery (4680 cells). In the industrial and consumer sectors, the company will strengthen its structure to meet increasing demand while promoting social transformation toward digitalization and electrification, including of social infrastructure and power equipment, with its highly safe and highly reliable technologies.
Message from the Department Head

By continuously making kaizen (improvement) efforts, we will thoroughly eliminate all kinds of wastefulness and stagnation, thereby enhancing competitiveness

Masanori Minamio
General Manager, Operational Strategy Department
Panasonic Holdings Corporation

Establishing kaizen know-how as a mindset
We have all kinds of wastefulness at the operational frontlines, including wastefulness in operations and wastefulness between operations. These are things that our customers don’t need and make our business less competitive. Kaizen is an activity to standardize and improve business processes. By using the power of digital technology, wastefulness can be analyzed and visualized, allowing people to focus on improvement activities. That will lead to higher quality of management.

The Company has been manufacturing many products globally for more than 100 years since its founding. Through all our experiences, we have accumulated knowledge in industrial engineering. Industrial engineering is a method for maximizing business and operational efficiency by standardizing business processes and quantitatively and scientifically analyzing operations at the operational frontlines. The Operational Strategy Department is developing initiatives to establish the kaizen know-how that has been accumulated as tacit knowledge at most of the operational frontlines as a mindset. In addition, we are promoting the training of “designated specialists” to disseminate these activities widely. We will continue to lead such activities in the “gembaka kaizen way” at all the operational frontlines, where people can feel the joy and satisfaction of kaizen, help each other, and create even more kaizen.

We also want to use our skills in kaizen, which eliminates wastefulness and stagnation, to support early recovery in the event of a disaster, for example. Furthermore, we will even offer these skills and know-how to Panasonic Group customers’ frontlines. Improving the overall supply chain will not only contribute to the management of our corporate customers, but also contribute to the reduction of their environmental impact and the well-being of their employees.

Case Examples of Operational Frontlines Innovation Initiatives

This section introduces case examples of the operational frontlines innovation initiatives that combine industrial engineering know-how accumulated at the operational frontlines with advanced digital technologies such as sensing and AI image recognition, which are strengths of the Panasonic Group.

1 Tsuruga Factory, Panasonic Automotive Systems Co., Ltd.

Assembly process is captured with omnidirectional cameras and analyzed with AI to identify rooms for improvements

At the Tsuruga Factory, which develops and assembles automotive components, a variety of kaizen (improvement) methods learned through interactions with automobile manufacturers have taken root as activities in which everyone participates, and kaizen is practiced on a daily basis with suggestions and ideas from each individual. In the component assembly process, work time of each worker is directly related to productivity. The factory therefore adopted the power of digital technology, using AI to analyze videos captured by omnidirectional cameras to identify rooms for productivity improvements. This has significantly reduced the man-hours required to analyze the current production status, which previously depended on human skills, further accelerating the pace of kaizen.

2 Saga Factory, Panasonic Connect Co., Ltd.

Optimize the mounting process with digital data and AI analysis of people, goods, and equipment

The Saga Factory is implementing innovation on the manufacturing floor in the mounting process used to manufacture printed circuit boards of various types and quantities. The factory is using a combination of omnidirectional cameras, equipment data, and production planning to identify rooms for productivity improvements and improve the speed and efficiency of product swapping. The planning is then optimized by identifying differences between the plan and the actual results. Specifically, using cyber-physical systems and AI to group and optimize parts according to the production plan has significantly improved production efficiency by minimizing the swapping of parts trolleys. In addition, by combining digital data on people, goods, and equipment and analyzing it with AI, higher productivity is achieved by extracting wasted time from highly individualized plans and allocating it to productive time. Compared to the year ended March 31, 2021 (fiscal 2021), the factory was able to reclaim 6,000 minutes of wasted time per month (as of April 2022).
Efforts to Thoroughly Strengthen Operational Capabilities

5 Service Parts Center in Saito, Osaka, Panasonic Connect Co., Ltd.

Process innovations through kaizen activities integrating industrial engineering knowhow and digital technologies to improve productivity

The Service Parts Center in Saito, Osaka handles service parts for the Media Entertainment BD and Mobile Solutions BD of Panasonic Connect Co., Ltd. The Media Entertainment BD handles broadcasting equipment and the Mobile Solutions BD develops Let’s note brand of notebook PCs, among other products. It maintains an inventory of more than 10 million parts needed for product repair and maintenance. The supply of service parts requires both the maintenance of service levels through prompt delivery and the reduction of warehouse housing costs and cash through appropriate inventory management. Reducing operational costs is an important effort that is directly linked to profits. At the Service Parts Center in Saito, the picking operation used to be the bottleneck of the entire operation, but it is now streamlined as a result of process innovations through kaizen activities integrating industrial engineering knowhow and digital technologies.

First, a dashboard system was built that combines WMS (Warehouse Management System) data and work footage from fixed cameras in an integrated way, allowing for time-saving identification of problems. This greatly speeds up the cycle from analysis to improvement and enables operations that can greatly reduce bottlenecks and waiting times. Next, a new technology was developed and introduced that can simultaneously estimate a parts picking cart’s self-position (localization) and acquire video images of the cart’s operation to track its movements even in indoor warehouses where GPS does not work. Flow line and bottlenecks, which could not be captured with fixed cameras alone, can now be fully grasped, greatly expanding the scope and targets for improvement. In addition, AI-based image analysis technology is used to break down the video footage taken with a camera of a person’s series of tasks into detailed elemental tasks and analyze them. Then, by identifying bottlenecks and applying kaizen techniques to these bottlenecks, it enables us to create the operational frontlines where business process transformation continuously takes place. In addition, spatial sensing technology has been used to monitor loading capacity by automatically tracking the fill rate in containers, shelves, and parcel cages, even while in motion. By maximizing the efficiency of warehouse space and deploying truck management synchronized with warehouse operations, we hope to be able to solve the problem of trucks waiting for long periods of time and delivering small payloads.

Introducing these kinds of digital technologies made it possible to comprehensively analyze the operating status of people and equipment, their movements, work data, demand data, and so on, use the data to identify warehouse conditions and problems, and make sure operations can keep up with fluctuations in load volume. This has eliminated the need to constantly allocate more resources in case of delays or shortages.

A work analysis showed that what used to take 600 minutes has been reduced to 15 minutes, a reduction of a factor of 40.* As a result, kaizen initiatives have been greatly accelerated. The productivity of picking operations has improved by 25% per year, productivity has almost doubled over the three-year period from 2017 to 2019, and in terms of cost performance, overall costs were reduced by 10%.*3

*1: Compared to 2016    *2: Three-year average from 2017 to 2019    *3: Service Agreement Fee was renewed in 2019

3 Kusatsu Factory, Electric Works Company, Panasonic Corporation

Detect signs of defects and anomalies and take countermeasures before they occur through analysis of manufacturing and post-sales data

The Kusatsu Fuel Cell Factory, which produces the “ENE-FARM” home fuel cell, carries out extremely complex and high-precision manufacturing using automated equipment and the craftsmanship of skilled workers. The data obtained in each process during manufacturing is also used to improve customer satisfaction. Various data and components in each process are linked to the analysis results of product defects in the market and the operating data from fuel cells that are actually installed and in operation. This makes it possible to detect defects and anomalies before they occur, giving customers additional peace of mind.

4 Kobe Factory, Mobile Solutions BD, Panasonic Connect Co., Ltd.

Blue Yonder’s solutions reduce production and disposal losses and optimize inventory

As a new initiative to apply kaizen made at the gemba (operational frontlines) in management, the Mobile Solutions BD, which manufactures and sells “Let’s note” brand of notebook PCs and “TOUGHBOOK” brand of rugged mobile computers for use at the gemba, is combining solutions from Blue Yonder, a Group company that provides software development and operation consulting in the supply chain management field, with data from continuous kaizen efforts at the gemba, and making its efforts to streamline the entire supply chain.

The products handled by the Mobile Solutions BD are primarily B2B. Therefore, the production plans had to directly reflect each customer’s demand for each product with different specifications, and if the load time was long, in some cases the customer’s requested delivery date could not be met. Meanwhile, from a management point of view, there was too much inventory among other problems. The introduction of Blue Yonder’s solutions, which provide a high level of situational awareness of the entire supply chain, has resulted in reductions in production and disposal losses and cumulatively saved approximately 2 billion yen since it was introduced in 2019 (as of April 2022). The solutions have also brought about a positive impact on management through inventory optimization.