

03

Growth Strategy


31 Progress on Medium-Term Management Plan 2024—Be a Trailblazer

36 Strategies by Sector

36 Material

43 Homes

47 Health Care



Name	Katerina Kasalova
Company	Sage Automotive Interiors, Strakonice Fabrics
Country/region	Czech Republic

Progress on Medium-Term Management Plan 2024—Be a Trailblazer

The Asahi Kasei Group is working to achieve the targets of its medium-term management plan (MTP) for fiscal 2024 focused on the theme “Be a Trailblazer” by promoting business portfolio management and strengthening its business platform in accordance with the basic policy. We continuously take on challenges and pursue transformation to realize our vision.

Basic Policy

Business Portfolio Management

Challenging investment for growth

Focusing resources on 10 Growth Gears (GG10) that will drive future growth and aiming to have them provide more than 70% of operating income around fiscal 2030

Implement both with an emphasis on speed, asset-light, and high value-added

Cash generation from structural transformation and strengthening existing businesses

Integrated approach to structural transformation comprising reform of strategic restructuring businesses and fundamental business structure transformation

Strengthening Business Platform

- Transformation in the key areas of green (G), digital (D), and people (P)
- Maximum use of intangible assets

Fiscal 2022 Results

Financial KPIs

Operating income ¥ **128.4** billion
ROE **-5.5%** ROIC **4.0%**

Non-Financial KPIs

Scope 1 and Scope 2 GHG emissions
3.68 million t-CO₂e¹

Volume of GHG emission reduction contributions of environmental contribution products
120 (index)²

Percentage of women among managers and Group Masters
3.8%

Number of digital professional human resources
1,206

Digital data usage
2.6 times (compared with FY2021)

Number of Group Masters
294

Contributing to sustainable society

Non-Financial KPIs

Scope 1 and Scope 2 GHG emissions
Reduction of **≥30%** (compared with FY2013)

Volume of GHG emission reduction contributions of environmental contribution products

Percentage of women among managers and Group Masters

At least **double**
(compared with FY2020)

10%

Vision

Two Mutually Reinforcing Aspects of Sustainability

Sustainable growth of corporate value

Financial KPIs

Operating income ¥ **400** billion
ROE **≥15%**
ROIC **≥10%**

Long-Term Outlook for Around FY2030

Fiscal 2024 Targets

Financial KPIs

Operating income ¥ **200** billion
ROE **≥9%** ROIC **≥6%**

Non-Financial KPIs

Number of digital professional human resources
2,500

Volume of digital data usage Number of Group Masters
10 times (compared with FY2021) **360**

FY2022

FY2024

April 2022

¹ Preliminary figure; may be revised due to third-party evaluation

² Indexed to FY2020 baseline as 100

Review of Fiscal 2022

In fiscal 2022, Asahi Kasei achieved record-high net sales of ¥2,726.5 billion, increasing sales across all business segments with expansion of existing businesses, continued weakening of the yen, and rising prices for petrochemical products. Meanwhile, operating income decreased to ¥128.4 billion, due in part to prolonged shortages of semiconductors, stagnant demand stemming from the impact of lockdowns in China, and surging feedstock and fuel prices. In addition, we incurred a net loss as a result of recording an impairment loss of ¥186.4 billion in March 2023 on Polypore International, LP, our U.S. subsidiary

which produces battery separators. In light of these setbacks, we expect to achieve the initial fiscal 2024 target of ¥270 billion for operating income two or three years behind schedule. We will continue to seek growth from a medium- to long-term perspective, targeting ¥200 billion in operating income as well as return on equity (ROE) of 9% or more and return on invested capital (ROIC) of 6% or more for capital efficiency in fiscal 2024. We are determined to return to a trajectory of growth through steady implementation of our strategy set forth in the initial plan.

Fields for Provision of Value / Sectors and Businesses	Fiscal 2022 Achievements and Issues	Direction for Fiscal 2030
<p>Environment & Energy</p> <p>Material sector Environmental Solutions</p>	<p>In Environmental Solutions, we focused resources on three approaches—expediting green solutions, cultivating energy storage businesses, and promoting actions to achieve carbon neutrality—with the aim of realizing green transformation.</p> <p>Operating income deteriorated significantly to an operating loss of ¥2.3 billion in contrast with the original forecast of ¥42.3 million. This outcome was attributable to the sluggish performance of the basic materials and separator businesses.</p> <p>We recognize that revising the strategy of the separator business and further accelerating the structural transformation of petrochemical chain-related businesses are pressing issues.</p>	<p>We will continue to make forward-looking investments in the separator business and in hydrogen-related businesses. For the separator business, we will improve the earnings base of existing businesses and revise our strategy to accelerate expansion considering the use of outside capital and alliances. Although it will take time for hydrogen-related businesses to contribute to profits, we will advance development in preparation for future expansion of demand.</p> <p>To accelerate structural transformation, we will consider drastic measures with regard to commodity products centering on petrochemical chain-related businesses.</p>
<p>Mobility</p> <p>Material sector Mobility & Industrial</p>	<p>In Mobility & Industrial, we enhanced our lineup of products in car interior material and next-generation mobility. In particular, we advanced concept proposals combining a diverse range of technologies and expertise in products for electric vehicles.</p> <p>Operating income of ¥10.8 billion was well below the original forecast of ¥23.8 billion, reflecting the impact of sluggish growth in the automobile industry as a result of semiconductor shortages and other factors.</p> <p>We recognize the need to carefully monitor automobile industry trends and to make progress toward restoration of earnings.</p>	<p>We are committed to accelerating the provision of innovative materials and solutions through the establishment of close partnerships with key automobile manufacturers to clearly ascertain signs of recovery in the automobile industry and restore earnings. We will strengthen the business structure by focusing on improving cost competitiveness and revising the product portfolio.</p>
<p>Life Material</p> <p>Material sector Life Innovation</p>	<p>In Digital Solutions, we integrated the electronic components and electronic materials businesses and proactively explored new business opportunities to address the needs of a digital society.</p> <p>While operating of ¥27.8 billion was lower than the original forecast of ¥37.4 billion due to factors including delays in the recovery of market conditions for certain products and the impact of a plant fire in Comfort Life, Digital Solutions achieved adequate earnings.</p> <p>We recognize that we must increase the production capacity of the electronic materials business to expand Digital Solutions.</p>	<p>We expect Digital Solutions to deliver strong growth and maintain high ROIC. In addition to expansion of existing products, we will implement aggressive expansion measures for cutting-edge semiconductors and packaging processes by exploring co-creation opportunities to provide new value.</p> <p>For Comfort Life, we will focus on rebuilding the earnings base.</p>

Fields for Provision of Value / Sectors and Businesses	Fiscal 2022 Achievements and Issues	Direction for Fiscal 2030
<p style="text-align: center;">Home & Living</p> <p>Homes sector</p>	<p>We pursued customer satisfaction by strengthening cooperation among business units amid challenging business conditions in the domestic business, while proactively expanding operations in the overseas business. Despite a difficult operating environment in the order-built homes business, including rising construction material costs, we increased net sales and operating income with higher average sales prices due to larger and higher value-added homes, as well as reduction efforts. In the overseas business, we advanced forward-looking business portfolio transformation by expanding the regions of operations through new acquisitions in North America and Australia. As a result, we recorded operating income of ¥76.0 billion, slightly exceeding the forecast at the beginning of the fiscal year. We recognize that the Homes sector faces challenges in terms of raising the productivity and profitability of various businesses to ensure their continued and consistent cash generation.</p>	<p>In the order-built homes business, we will instill marketing strategies, including those for high-end customers. In addition, we will promote high value-added strategies by raising our proportion of homes compliant with Net Zero Energy House (ZEH) and ZEH Mansion (ZEH-M) standards and work to realize a sustainable society in various ways, such as achieving the goal of the RE100 initiative. In the overseas business, we will build a business platform resilient to material costs and fluctuations in demand with the aim of improving efficiency through industrialization and providing high-quality homes by raising productivity.</p>
<p style="text-align: center;">Health Care</p> <p>Health Care sector</p>	<p>In Health Care, we are advancing toward becoming a global health care company by capturing a broad range of opportunities in global markets in both the pharmaceutical and medical device businesses to drive overall income growth.</p> <p>Despite strong sales growth for mainstay products in the pharmaceutical and medical businesses, operating income was ¥41.9 billion compared to the original forecast of ¥58.0 billion. This was largely attributable to the difficulty of procuring components due to semiconductor shortages, and a slowdown in orders stemming from U.S. economic downturn, resulting in a pause in growth in the critical care business.</p> <p>We entered the biopharmaceutical CDMO business through an acquisition in the medical business to achieve growth over the medium term.</p> <p>Although results were below the original forecast in fiscal 2022, we expect the sector to grow over the medium to long term. This will require steady implementation of the growth strategy set forth in the MTP.</p>	<p>Identifying the critical care, global specialty pharma, and bioprocess businesses as growth areas, we will seek to expand existing businesses and reap the benefits of proactive investments thus far. In addition, we will continuously capture growth opportunities in the global market by leveraging business development measures including M&A and in-licensing to pursue further expansion of sales and profit.</p>

Challenging Investment for Growth

In fiscal 2022, we focused resources on the GG10 businesses to drive future growth. We aim for GG10 to account for over 70% of our overall operating income by around fiscal 2030. We are actively exploring M&A opportunities and making bold investments to achieve this. While our approach of focusing

resources on GG10 will continue in fiscal 2023, we will further clarify the priority of resource allocation among GG10 as we make investment decisions.

Positioning of Investments	GG10	Investment Scale and Direction (FY2022–2024, decision-adopted basis)	Profit ¹ Growth Target (increase in FY2024 compared with FY2021)
First Priority Maintain proactive investments for growth over the medium term, increase focus on gaining income from past investments	Health Care		
	Critical Care	Up to ¥200 billion in investments is planned, including the acquisition of Bionova Scientific, LLC (Bionova), a U.S. biopharmaceutical CDMO, in May 2022. We will continue to proactively explore investment opportunities to achieve growth in Health Care. Regarding previous M&A investments, sales at Veloxis Pharmaceuticals, Inc. (Veloxis), declined amid the impact of the COVID-19 pandemic, and progress is delayed by one or two years from the initial plan. Respicardia, Inc., and Itamar Medical Ltd., (Itamar), aim to expand sales by steadily creating synergies with ZOLL Medical Corporation (ZOLL). Bionova has decided to increase its capacity for process development and GMP ² manufacturing of next-generation antibody drugs while aiming to increase profits by expanding orders.	Approx. ¥15 billion increase ↑
	Global Specialty Pharma		
	Bioprocess		
	Life Material		
Digital Solutions	We plan to invest up to ¥200 billion, including the fiscal 2022 decision to increase production capacity of Pimel™ photosensitive polyimide. We will continue to seek growth through proactive investments, including inorganic growth.	Approx. ¥10 billion increase ↗	
Growth Potential Make upfront investments while cooperating with other companies to strengthen competitiveness as drivers of future growth	Environment & Energy		
	Energy Storage	We plan to invest over ¥200 billion, primarily in the separator business and hydrogen-related businesses, which have high growth potential over the medium term, as upfront investments in future growth drivers. For the separator business in particular, we are examining the possibility of making large-scale investments, such as to establish manufacturing of Hipore™ LIB separators in the North American market.	– →
	Hydrogen-Related		
CO ₂ Chemistry			
Earnings Base Expansion Explore and examine investment opportunities to steadily expand earnings scale, continue to consistently generate earnings	Home & Living		
	North American and Australian Homes	We plan to make investments up to ¥100 billion, including the acquisitions of the Focus Companies of the U.S. in November 2022 and Arden Homes Pty Ltd. of Australia in February 2023. Regarding previous investments, we expect Synergos Operations LLC, our North American homes business, to see persistently firm demand, reflecting acute shortages of homes in the regions where it operates. NXT Building Group Pty. Ltd., our Australian homes business, will accelerate growth by streamlining construction processes and improving efficiency.	Approx. ¥10 billion increase ↗
	Environmental Homes and Construction Materials		
Mobility			
Car Interior Material	We plan to invest up to ¥100 billion, including the fiscal 2022 investment to expand car interior material in the U.S. We will concentrate on reaping the benefits of previous investments while focusing on investments with a high degree of certainty going forward. Although the performance of Sage Automotive Interiors, Inc., (Sage) stagnated due to sluggish growth in the automobile market, it will return to a growth trajectory in line with market recovery.	Approx. ¥10 billion increase ↗	

¹ Profit: Operating income + amortization from PPA

² Good Manufacturing Practice, a collection of regulations related to manufacturing with which manufacturers of pharmaceuticals are required to comply. The manufacture of pharmaceuticals according to strict GMP regulations is referred to as GMP-compliant manufacturing.

Cash Generation from Structural Transformation and Strengthening Existing Businesses

We will further accelerate the structural transformation of businesses in response to underperformance compared with the initial targets set forth in the MTP. At the outset of the MTP, we advanced such transformation under the two approaches of reform of strategic restructuring businesses—which saw a deterioration in recent performance due to the impact of the COVID-19 pandemic and other factors—and fundamental business structure transformation, in terms of both performance and compatibility with our medium-term vision. As these efforts involve businesses with interdependent supply and demand relationships, such as for raw materials, we are currently examining ways to achieve structural transformation through the integration of the two approaches. Net sales of businesses to be targeted for structural transformation totaled more than ¥700 billion in fiscal 2021. Of these, we aim to complete the structural transformation of multiple businesses with net sales totaling ¥100 billion or more by fiscal 2024, including those identified as Exit businesses in the reform of strategic restructuring businesses. Meanwhile, we will undertake the structural transformation of petrochemical chain-related businesses, which we have designated as businesses handling commodity chemicals, the earnings volatility of which has once again become prominent. Although there is some overlap with the aforementioned businesses with net sales totaling ¥100 billion or more, net sales of petrochemical chain-related businesses total approximately ¥600 billion.

Directions of Business Structure Transformation Under Consideration

- Planning to implement structural transformation of businesses with sales of **more than ¥100 billion** during FY22–24 (incl. those designated as Exit in the Strategic Restructuring Business)
- Examining the medium-term direction of the petrochemical chain-related business with sales of **approximately ¥600 billion** with a view to carbon neutrality

Sales of subject businesses
(FY21 results)

¥700 billion or more

Discussions on petrochemical chain-related businesses are proceeding with particular emphasis on whether such businesses can be sufficiently profitable considering the investments required to achieve carbon neutrality and related costs including carbon taxes.

We have established three major options for the direction of business structure transformation: 1) collaborative operation with other companies through joint ventures and other arrangements, 2) exit from the business, and 3) developing carbon-neutral technologies and increasing added value. We are exploring the possibility of the third option while also examining the first and second options. We have already confirmed the direction and taken concrete action for several businesses, such as seeking suitable partners from the best-owner perspective and advancing negotiations, and will finalize the direction and steadily implement the structural transformation of the remainder by fiscal 2024. Although the removal of some businesses from the scope of consolidation due to business withdrawal or the launch of joint ventures with other companies will result in a decline in the operating income of petrochemical chain-related businesses, we will seek to transition to an earnings structure that enables stable earnings growth. In addition, we aim to achieve carbon neutrality throughout our supply chain and to generate profits through a licensing business by developing technology related to bio-based feedstocks.

Policy of Structural Transformation of Petrochemical Chain-Related Businesses

	Approaches	Example of Initiatives
1) Collaborative operation with other companies through joint ventures, etc.	<ul style="list-style-type: none"> • Raising competitiveness • Sharing required investment and cost burden • Mutual utilization of innovations for carbon neutrality 	Established JV for spunbond nonwovens
2) Exit from the business	<ul style="list-style-type: none"> • Plant downsizing/closure • Sale of the business to the best owner 	Divestiture of photomask pellicles
3) Developing carbon-neutral technology and increasing added value	<ul style="list-style-type: none"> • Using proprietary or licensed technology for carbon neutrality • Transformation of product portfolio with value for customers 	Developing proprietary technology for basic feedstocks from bioethanol

Strategies by Sector

Material sector

Message from the
Head of the
Material Sector

Koshiro Kudo

Executive Officer

for Material Business Sector

President & Representative Director

Presidential Executive Officer

Asahi Kasei Corp.

Addressing society's ever-changing needs with diverse technologies and innovation

We operate three businesses in the Material sector: Environmental Solutions, Mobility & Industrial, and Life Innovation. These correspond to the Environment & Energy, Mobility, and Life Material fields for provision of value, addressing society's ever-changing needs with a lineup of high value-added materials and products unique to Asahi Kasei.

In fiscal 2022, the performance of the basic materials business in Environmental Solutions in particular declined sharply, reflecting a generally harsh operating environment. I believe this decline highlighted again the need for structural transformation centered on the petrochemical chain-related businesses. In the separator business, we made clear our policy of focusing resources on growing the Hipore™ business and recorded an impairment loss on Polypore International, LP. Fiscal 2022 was also a year that saw us advance transformation focused on the medium-term direction of the sector, such as transferring the photomask pellicles business and establishing a joint venture for the spunbond nonwoven products business, taking into consideration the best-owner perspective.

In fiscal 2023, despite continuing uncertainty in the operating environment, including a slowdown in demand due to an economic recession centered on China, we will strive to expand growth businesses, such as separators, car interior material, and Digital Solutions. At the same time, we will continue to

advance the business reforms we have been studying, including withdrawal from the general-purpose tire cord business, to increase profitability.

Promoting Business Portfolio Transformation to Focus Resources on Future Growth Businesses

The Material sector is targeting net sales of ¥1.53 trillion and operating income of ¥110 billion for fiscal 2024, the final year of the MTP. Although achieving the target for operating income will require a significant improvement from the level of fiscal 2022, we will execute a range of measures, such as those for raising productivity and reducing costs, and clarify our resource allocations, including for business portfolio transformation, to expand growth businesses focused on GG10.

Asahi Kasei has established three categories for GG10 according to business direction. We regard Digital Solutions, which we have positioned as a first priority area, as a business with the potential to aim for high growth while maintaining a high return on invested capital (ROIC). Accordingly, in addition to achieving growth in individual products such as Pimel™, whose production capacity we decided to expand for leading-edge semiconductors, Digital Solutions will seek to offer unique value drawing on its combined strengths in electronic components and electronic materials and pursue inorganic growth opportunities.

Digital Solutions

- Mixed-signal LSIs, electronic compasses
- Magnetic sensors
- Gas sensors
- Pimel™ photosensitive polyimide/PBO precursor
- Sunfort™ dry film photoresist
- Glass fabric

Comfort Life

- Bemberg™ cupro fiber, Roica™ premium stretch fiber
- Saran Wrap™ cling film
- Ceolus™ microcrystalline cellulose pharmaceutical and food additive
- Photopolymers and platemaking systems

Mobility & Industrial

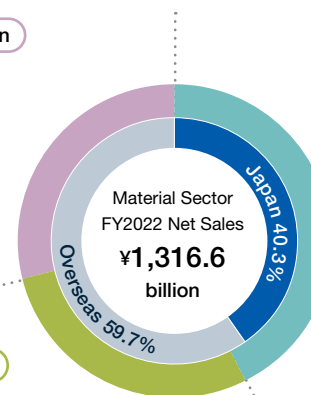
- Car interior fabric
- Dinamica™ artificial suede
- Leona™, Tenac™, and Xyron™ engineering plastics, SunForce™ foamed beads, Asaclean™ purging compound for molding machines

- Leona™ nylon 66 filament
- Duranate™ curing agent for polyurethane coatings

Life Innovation

Environmental Solutions

- Hipore™ and Celgard™ lithium-ion battery separators, Daramic™ lead-acid battery separators
- Chlor-alkali electrolysis systems, Microza™ hollow-fiber filtration membranes
- Synthetic rubber, elastomers
- Acrylonitrile (AN) and other petrochemical-related products



Message from the Head of the Material Sector

We have positioned the energy storage business—which includes separators—the hydrogen-related business, and the CO₂ chemistry business as growth potential areas. Given their high potential for growth over the long term, we will make strategic upfront investments in these three businesses, including utilizing the capital of other companies. In the hydrogen-related business, we are conducting verification trials to commercialize an alkaline water electrolysis system and examining potential business models. As we are receiving many inquiries in response to global trends, we are working to accelerate commercialization of the system.

We have positioned the car interior material business as one of our earnings base expansion areas. Although the business has been affected by the downturn in production in the automobile industry in recent years, sales volumes are recovering and a structure for achieving expansion while generating stable earnings, including the results of measures for raising productivity, is once again taking shape. We will aim for further growth by firmly benefiting from market recovery.

Meanwhile, we must examine structural transformation of the petrochemical chain-related businesses with an eye to achieving carbon neutrality. The frame of reference of the examinations will come down to whether meeting the costs required to address environmental issues will allow the businesses to make sufficient profits. We will consider a variety of options, such as promoting the development of technology and the creation of products with high added value in relation to addressing environmental issues, as well as the establishment of joint ventures with other companies and withdrawal from businesses, if required, after carefully examining the profitability and competitiveness of each business.

Pursuing High Added Value and Earnings Growth by Creating New Business Models

The Material sector operates a diverse range of businesses. Although it faces challenges related to business structure transformation and decarbonization, the sector also has a purpose and the potential to continuously spur innovation, creating new materials and new business models to realize the Group Mission. Under the concept of Product-based Platform as a Service (P-PaaS), which provides a platform that helps increase customer value, the Material sector will expand solution-oriented businesses that do not simply sell products. For example, it will offer data-driven services, such as predictive maintenance and optimal operation proposals, using smart electrolyzers for the ion-exchange membrane electrolysis process.

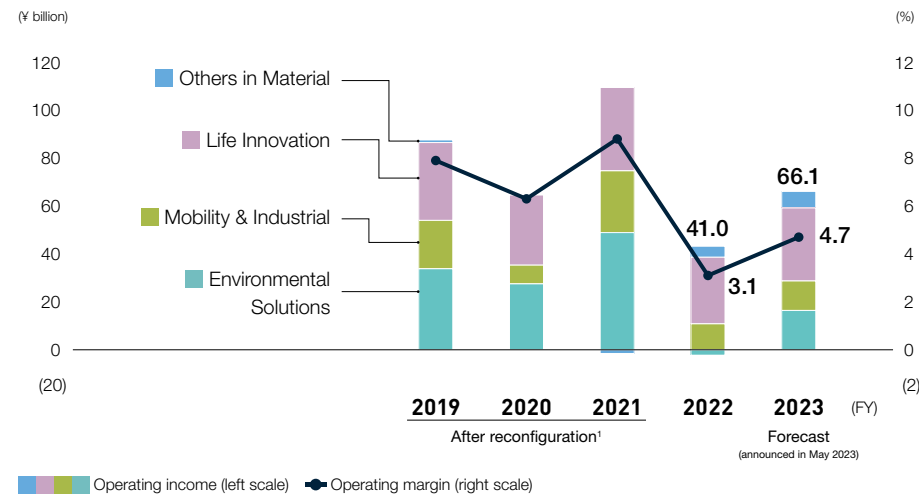
Through these efforts, we will promote business expansion by shifting management resources to future growth fields with the aim of establishing a high value-added profit structure that is resilient to changes in market conditions.

KPIs

	FY2021 (after reconfiguration ¹)	FY2022	FY2024 target (announced in Apr. 2023)
Net sales (¥ billion)	1,210.0	1,316.6	1,530.0
Operating income (¥ billion)	106.0	41.0	110.0
Operating margin	8.8%	3.1%	7.2%
EBITDA (¥ billion)	183.0	128.5	187.0
EBITDA margin	15.1%	9.8%	12.2%
ROIC²	6.7%	2.4%	6.0%

Note: Shaded rows are management KPIs in the Material sector

Operating income, operating margin



¹ Figures have been recalculated to reflect the revision of business categories in FY2022

² ROIC = operating income (1 – tax rate) / (fixed assets + working capital, etc.)



GG10 Hydrogen-Related

Environment & Energy

Helping to reduce greenhouse gas emissions around the world through the supply of low-cost green hydrogen by swiftly commercializing large-scale alkaline water electrolysis systems and becoming a key player in the hydrogen supply chain

Operating Environment

Global progress in hydrogen-related technology development aimed at realizing a decarbonized society

As hydrogen is gaining attention as an essential material for a decarbonized society, projects related to green hydrogen produced using renewable energy are being launched around the world.

There are several methods for producing hydrogen. Among them, Asahi Kasei is developing alkaline water electrolysis technology, which is suited for large-scale systems and is expected to enable low-cost, mass production of hydrogen. As seen not only in highly environmentally conscious Europe, but also with the Inflation Reduction Act that went into effect in 2022 in the U.S. and the 2023 revision of the Basic Hydrogen Strategy in Japan, the movement to adopt green hydrogen production and usage is gaining momentum worldwide, and the market for electrolysis systems for hydrogen production is expected to grow significantly going forward.

Strengths of the Asahi Kasei Group

Steady verification of alkaline water electrolysis systems based on chlor-alkali electrolysis technology

Asahi Kasei's alkaline water electrolysis systems are based on the ion-exchange membrane chlor-alkali electrolysis technology that we commercialized in 1975. In the chlor-alkali electrolysis field, we have the ability to provide membranes, electrolytic cells, electrodes, operating technology, and monitoring systems, and we have a high global market share in ion-exchange membranes. We are leveraging the expertise we have accumulated in this area to develop large-scale alkaline water electrolysis systems that can be used with renewable energy and other intermittent power supplies, and we are participating in multiple verification projects in this regard.

In Japan, trial operation of a 10 MW-class water electrolysis system is underway at the Fukushima Hydrogen Energy Research Field of the New Energy and Industrial Technology Development Organization (NEDO). In addition, our joint verification project with JGC Holdings Corporation was adopted as a NEDO Green Innovation Fund project, specifically for hydrogen production through electrolysis using renewable energy. In this project, we are working to develop large-scale alkaline water electrolysis hydrogen production systems, with the target of creating 100 MW-class systems, as well as systems for integrating and controlling the production of green chemicals using renewable energy. In Europe, Asahi Kasei has accumulated operating expertise and data through participation in the ALIGN-CCUS project and its successor, the TAKE-OFF project. Additionally, in 2023, our "verification research on alkaline water electrolysis systems to expand the supply of green hydrogen (Europe)" was selected as a NEDO research project*. We will continue to work with partner companies to acquire knowledge for commercialization.

* NEDO's international verification project on Japanese technology for promoting energy consumption efficiency, which aims to study the technology's satisfaction of verification requirements (pre-verification study and verification research)

Business Strategies

Becoming a leading supplier of alkaline water electrolysis systems through swift commercialization and supply chain development

While performing trials to enhance safety, durability, and performance, and achieve high-reliability alkaline water electrolysis systems, we are working to reduce the costs for practical application with commercialization targeted in 2025. We will start by introducing these systems in regions that are ahead of other markets in this regard, but in the future, we aim to capture a major global market share of electrolysis systems, and are considering involvement in operations and monitoring as well.

In 2022, with funding from NEDO, we broke ground on a pilot facility at our Kawasaki Works to conduct verification tests to control multiple electrolyzer modules. We also joined the Hydrogen Council, a global initiative involving approximately 150 companies and organizations, as a steering member. In 2023, we joined the Japan Hydrogen Forum, which supports decarbonization in the U.S., and we have been deepening our collaboration with various government agencies, companies, and organizations.

Our hydrogen-related business requires the development of new supply chains through collaboration with various companies, ranging from upstream energy suppliers to downstream hydrogen users. We are already receiving many inquiries regarding our alkaline water electrolysis systems. Accordingly, we will be seeking out ideal partners as we drive the development of the supply chain, and we will accelerate the global expansion of our hydrogen-related business to meet rapidly growing demand.

Key Points for Development of the Hydrogen-Related Business

- Completion of technologies for large-scale systems and modularization
- Development of integrated control systems (overall process optimization)
- Cost reduction of alkaline water electrolysis systems
- Development of partnerships in the supply chain
- Securing hydrogen demand based on region and business model

Commercialization in 2025 and growth into new business pillar in 2030

GG10 CO₂ Chemistry

Environment & Energy

Pursuing carbon neutrality by utilizing cutting-edge, proprietary technologies to separate, recover, and utilize CO₂

Operating Environment

Development of various CO₂-related technologies for contributing to decarbonization

For carbon neutrality, technologies for separating, recovering, and utilizing CO₂ are being developed around the world.

Centered on eco-conscious Europe, movements toward carbon neutrality are advancing in various industries. Specific efforts include recovering CO₂ from flue gas at power plants and factories, and separating CO₂ and recovering methane from biogas. Accordingly, related markets are expected to grow rapidly in the future.

There has also been a sharp increase in attention directed toward carbon footprints in the procurement of raw materials. There is thus rising interest in reducing CO₂ emissions from raw material manufacturing processes as well as in using materials produced from CO₂.

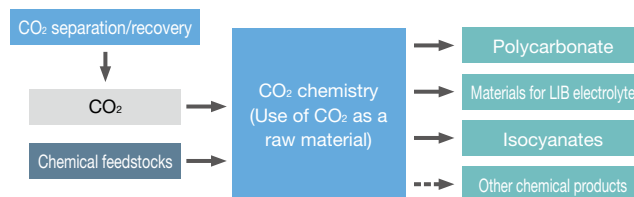
Asahi Kasei is developing CO₂ separation and recovery technology as well as technology for producing chemical products from CO₂ (CO₂ chemistry). We thereby aim to contribute to reduced CO₂ emissions through various efforts spanning from CO₂ recovery to usage.

Strengths of the Asahi Kasei Group

CO₂ adsorption through proprietary zeolite and use of CO₂ as a material via various technologies

Asahi Kasei is developing CO₂ separation and recovery technology that adsorbs CO₂ from mixed gases using a proprietary zeolite. We have a long history of using zeolite as a catalyst, and the associated knowledge and technology are being utilized for the purpose of CO₂ adsorption. The CO₂ adsorption process using our zeolite only requires half of the energy needed for the amine method that is currently mainstream. This process is therefore expected to contribute to lower CO₂ recovery costs.

Moreover, the Asahi Kasei Group has been engaged in the development of CO₂ chemistry, for using CO₂ as a raw material, since the 1980s. In 2002 we began licensing our polycarbonate manufacturing technology which was the first in the world to utilize CO₂ while also not using toxic phosgene, and our technology is used for 16% of global polycarbonate production capacity. Based on this technology and our commercialization expertise, we started licensing a technology that uses CO₂ as a raw material for lithium-ion battery (LIB) electrolyte in 2021. We are also developing various isocyanates for use as materials for producing polyurethane. The Asahi Kasei Group enjoys world-leading R&D capability and a track record of commercialization in these fields.



Business Strategies

Verification trials for CO₂ separation and recovery technology, and advancement of business for CO₂ utilization technology

Asahi Kasei is considering verification trials for CO₂ separation and recovery technology using actual gas with the aim of commercializing the technology by fiscal 2027 for processes using biogas or other gases. In Europe, the trend toward encouraging the use of biogas is picking up pace. Reflecting this trend, we are seeing the announcement of a variety of policies, programs, and investment plans, such as the European Commission's REPowerEU plan, which incorporates the use of biogas to replace natural gas from Russia. We are considering verification in Europe where growing demand is forecasted for separating CO₂ from biogas to recover methane. We are also developing systems for power plants, factories, and other facilities.

As for CO₂ chemistry, we are focused on licensing the technology we have commercialized for LIB electrolyte material. At the same time, we are accelerating the development of isocyanate production technology. We are targeting the commercialization of a special isocyanate expected to be used as a next-generation automotive paint material in 2026. The performance of the material has received a strong reception in sample evaluations conducted at paint manufacturers, automobile manufacturers, and other potential customers.

Other new technologies under development include CO₂ conversion using green hydrogen, ethylene production by CO₂ electroreduction, and bio-conversion of CO₂.

With our world-leading environmental solutions technologies, we will contribute to the increased utilization of CO₂ and to the reduced use of fossil resources.



GG10 Energy Storage

Environment & Energy

Responding to rising energy storage demand associated with decarbonization, expanding contributions centered on LIB separators; pursuing new business opportunities related to next-generation energy storage devices

Operating Environment

Rising importance of LIBs as energy storage devices widely adopted throughout society

The need for energy storage is accelerating along with the trend toward decarbonization. While various new technologies are being developed, we believe lithium-ion batteries (LIBs) will remain an important device in this field for the foreseeable future, and the market is expected to grow substantially due to the rapidly advancing move toward vehicle electrification. The U.S. Inflation Reduction Act, which went into effect in 2022, is also expected to stimulate the further proliferation of electric vehicles.

Current mainstream LIBs use either ternary or lithium iron phosphate (LFP) cathode materials. LIBs that use ternary cathode materials are characterized by high capacity, and mainly use wet-process separators, while those that use LFP cathode materials mainly use dry-process separators.

In addition, rapidly rising global demand for LIBs is also projected to stimulate increased demand for LIB reuse and recycling solutions, which should give rise to new markets.

Strengths of the Asahi Kasei Group

Addressing diverse needs based on accumulated expertise and industry-leading technological capabilities

The LIB separator business operated by the Asahi Kasei Group is based on technology and knowledge that we have cultivated since the 1970s, and includes LIB research and the development of prototypes that would evolve into the LIBs of today.

Our strengths in this business include the quality, safety and high performance of our separators backed by our technological expertise, and reliable supply capability, plus our experience with both wet-process and dry-process separators. We have earned particular recognition for our ability to make proposals and develop products that leverage these strengths, and we have built strong relationships with customers in areas demanding high levels of performance. Sales volumes for our wet-process Hipore™ separators grew at a compound annual growth rate (CAGR) of 17% from 2000 to 2021. Additionally, our strengths include world-class environment-friendly technology, high productivity powered by accumulated production technologies, and a comprehensive patent portfolio.

In China, where the LIB market is expanding, the dry-process separator joint venture established by our subsidiary Polypore International, LP, and Shanghai Energy New Materials Technology Co., Ltd. (SEMCORP) to tap into the market for energy storage system LIBs, commenced operations in the second half of fiscal 2022.

Business Strategies

Pursuing growth in the separator business while exploring new business opportunities

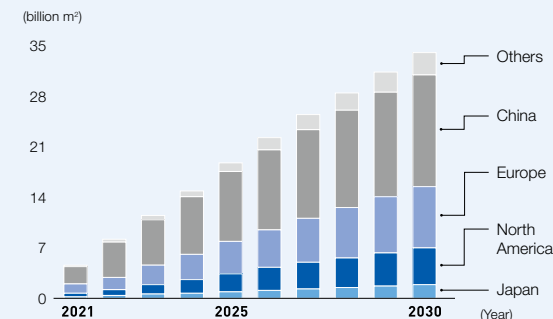
With the growth of the separator business as its focus, the Asahi Kasei Group is pursuing further possibilities in energy storage-related businesses.

We have decided to concentrate resources on the growth potential of Hipore™ in the separator business, and in this pursuit with North America as our main target market going forward, we are considering means such as alliances to strengthen our supply framework. Currently, none of the major separator manufacturers have wet-process production facilities in North America, with each company competing under the same conditions. Therefore, we aim to establish a solid position by leveraging the strengths of Hipore™, namely its high performance, quality, safety, productivity, and environment-friendly technology.

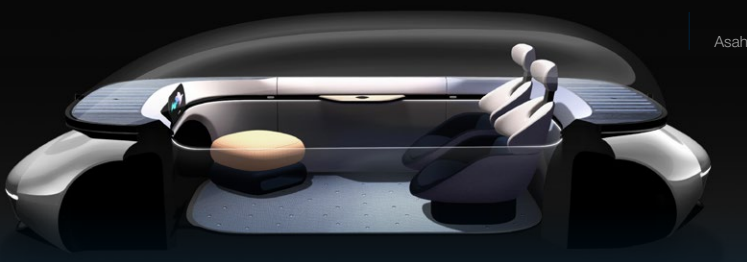
Meanwhile, we are working toward the development of next-generation energy storage devices. In fiscal 2023 we commenced full-fledged licensing activities for innovative lithium-ion capacitors featuring improved energy density and reduced costs. We are also working to commercialize the technology that is currently under development for innovative electrolyte material utilizing high ion-conductivity solvents.

In addition, for longer-term business development, we are leveraging the knowledge we have cultivated in the separator business to create solution-oriented business and develop next-generation innovative batteries to meet the needs of a vast energy storage market.

Outlook for automotive LIB separator demand



Source: Asahi Kasei estimates



GG10 Car Interior Material

Mobility

Supplying proprietary, differentiated, high value-added solutions to the automotive interior material market, which is growing in conjunction with the diversification of automotive interior needs

Operating Environment

Growth projected in automotive interior material market together with diversification of automotive interior needs

Due to the advancement of CASE and MaaS trends in the automotive industry and the growing awareness of sustainability, needs regarding automotive interiors are becoming more diverse. These trends are creating needs for functions and characteristics in materials and components that differ from conventional expectations.

As a result, the automotive interior material market is projected to grow at a faster rate than vehicle production volumes. The broadening range of automotive interior needs presents a substantial business opportunity for us, with our diverse lineup of products and technologies.

Changes to Automotive Interiors Driven by CASE

	Connected	Autonomous	Shared	Electric
Changes in automotive interiors	<ul style="list-style-type: none"> Monitoring of in-vehicle environment Recognition and monitoring of passengers 	<ul style="list-style-type: none"> Use as in-vehicle living room or office Diversification of seat design and layout 	<ul style="list-style-type: none"> Public use Availability for various purposes 	<ul style="list-style-type: none"> Noise reduction Thermal management Weight reduction
New needs for interior parts/components	<ul style="list-style-type: none"> Monitoring technologies Smart textiles 	<ul style="list-style-type: none"> Greater comfort Innovative designs 	<ul style="list-style-type: none"> Easy cleaning, antifouling properties Odor resistance, antibacterial properties Enhancement and diversification of performance 	<ul style="list-style-type: none"> Soundproofing, vibration proofing, thermal insulation Transition to new materials

Strengths of the Asahi Kasei Group

Meeting customer needs with high-quality sustainable materials and strong design proposal capabilities

Sage Automotive Interiors, Inc., which joined the Asahi Kasei Group in 2018, enjoys strengths in its design and customer proposal capabilities. By using these strengths to deploy regional and material strategies on a global scale, we have secured a position as a leading global supplier in the seat fabric* market. In 2023, we rebranded our artificial suede material by integrating Lamous™ with Sage's Dinamica™, and we are focusing on integrated promotion from raw fabric to finished products.

Our artificial suede has been well received as a high-quality sustainable material that uses no organic solvents during the production process. Combining this with Sage's design capabilities has enabled us to create distinctive high value-added products that have been increasingly adopted around the world. To respond to the resulting robust demand, in fiscal 2022 we added production capacity in Nobeoka City, Miyazaki Prefecture, Japan.

Our diverse lineup of products and technologies includes various offerings for increasing the quality of automotive interiors, and combining these offerings to make unique proposals creates significant opportunities for Asahi Kasei. At the same time, we will take advantage of our digital transformation, intellectual property (IP), and other foundations to provide proposals that leverage IP landscaping for automobile manufacturers.

* Knitted, woven, and nonwoven car seat fabric (excluding natural and synthetic leather)

Business Strategies

Becoming an automotive interior solutions provider by offering value that meets new needs

In our car interior material business, we are targeting net sales exceeding ¥100 billion in 2024. In addition to artificial suede, demand is growing for PVC synthetic leather as an alternative to natural leather, and to expand the product lineup to meet customer needs, we have begun producing this material in China, with expansion to other regions planned in the future. We continue to raise production capacity for Dinamica™ products while reinforcing sustainability initiatives. Additionally, in parallel with business expansion, we will strengthen our production through means including factory closure and consolidation, and develop frameworks for regional supply in accordance with regional demand. By so doing, we will further solidify our position as a leading supplier.

Our growth strategies for meeting diversifying automotive interior needs include the further differentiation of our solutions. We will acquire foundations for direct involvement in and contribution to the development activities of automobile manufacturers in specific automotive interior fields, and develop vegan leather and other plant-derived materials, highly recyclable monomaterials, and materials featuring greater comfort. In addition, effective key account management practices will be adopted to gain a better understanding of automobile production processes so that we can provide unique, comprehensive solutions through development proposals matched to current trends and needs.

By honing superiority for solutions in terms of design, sustainability, and comfort, we aim to become a distinctive automotive interior solutions provider by developing materials and components, and by offering services, with a focus on user experience.



GG10 Digital Solutions

Life Material

Leveraging a unique position of having both electronic components and electronic materials; addressing the needs of the digital society with distinctive components, materials, and solutions

Operating Environment

Accelerated evolution of digital technologies and solutions in response to diversification of needs stimulated by social change

Digital technologies and solutions are constantly evolving along with the accelerated digitalization of society, including the progress of AI technology, leading to continued market growth. As needs become more diverse in a variety of fields, digital technologies and solutions have become imperative to providing new value in response to changes in the operating environment.

The market is expected to continue to undergo substantial growth as a result of the advancement of digital technologies and solutions. It is expected that continuous significant market expansion will be especially driven by rapid market change toward electric vehicles amid rising environmental awareness; digitalization as seen in the spread of 5G, 6G, and other high-speed communications systems; and the rising desire for more comfortable lifestyles as people live healthier and longer.

Strengths of the Asahi Kasei Group

Deployment of high value-added products that lead the markets for electronic components and electronic materials

Business promotion reflecting market trends for both electronic components and materials is a major strength of the Asahi Kasei Group.

In our electronic components business, we draw on our years of experience in analog signal processing technology to propose optimal solutions for markets related to energy conservation and healthy and comfortable lifestyles—including electric vehicle applications—centered on sound quality control, and magnetic, electric current, infrared, and other sensing devices. Leading the industry in terms of mixed-signal large-scale integrated circuit design technology for bridging the gap between analog and digital information, Asahi Kasei offers a number of products with world-leading market shares, building strong, trust-based relationships with customers as an innovative and distinctive electronic components manufacturer.

In addition to its sophisticated development capabilities, manufacturing technology, and quality control, our electronic materials business builds on its strength in accommodating customer requests to underpin the growth of the cutting-edge semiconductor market by maintaining a lineup of high-performance and highly competitive products. World-leading market shares have been maintained along with high evaluation globally for products including Pimel™ photo-sensitive polyimide precursor, a semiconductor buffer coating; dry film photoresist used in etching circuits on printed wiring boards; and ultra-thin glass fabric for printed wiring boards.

Electronic components	Electronic materials
<p>Creating innovative products with competitive sensing technology in the xEV, energy conservation, and comfort markets</p> <ul style="list-style-type: none"> • Sensing (magnetic, current, infrared, and millimeter wave) • Analog signal processing • Software algorithms 	<p>Providing highly competitive materials and solutions for cutting-edge semiconductor and packaging process innovations</p> <ul style="list-style-type: none"> • High-density wiring (photosensitive dry film and photosensitive buffer coat) • Low transmission loss (low-dielectric glass fabric and plastic optical fiber) • High-precision adhesion (latent epoxy hardener)

Business Strategies

Provision of unique solutions matched to new market needs through the integration and unified management of the electronic components and materials businesses

The unified management of the electronic components and materials businesses will allow Asahi Kasei to accurately identify market trends and create solutions using its various acquired technologies, thereby accelerating growth through distinctive products and services. We will aim to achieve operating income of ¥70 billion for Digital Solutions by around 2030.

In electronic components, we established a project to expand our business for electric current sensing devices with high-speed response and high sensitivity, ideal for next-generation power device applications that are seeing an expansion in demand related to electric vehicles. With a focus on China, we also set up garage-style laboratories at several global bases, where customers can experience noise cancellation technology, high-precision CO₂ sensors, and other solutions that enhance the sound and air quality of spaces, such as living rooms and car interiors, to accelerate sales expansion. In addition, we will pursue further business opportunities for Hall elements that contribute to the environment and to energy conservation and explore opportunities to offer solutions based on environmental sensing.

In electronic materials, we are seeking to expand our provision of highly competitive electronic materials and solutions, to spur technological innovation in 5G, 6G, and other communication systems that support the development of digital society and in cutting-edge semi-conductors and packaging processes used in data servers and other equipment. To this end, we have decided to increase production capacity for Pimel™.

Meanwhile, we are promoting the acceleration of product development utilizing digital transformation and activities to spur innovation to achieve future growth. In addition to autonomous growth, we will advance value creation, including through the adoption of outside technologies and through M&A, to strengthen and expand our business domain.

Strategies by Sector

Homes sector

Message from the Head of the Homes Sector

Fumitoshi Kawabata

Executive Officer

for Homes Business Sector

Vice-Presidential Executive Officer,
Asahi Kasei Corp.

President & Representative Director,
Asahi Kasei Homes

Director,

Asahi Kasei Construction Materials



“ Celebrating half a century of the homes business, striving forward as an essential company of true value for all stakeholders

“Long Life” Concept Focused on the Future

In fiscal 2022, we celebrated the 50th anniversary of Asahi Kasei's homes business. I would like to express my sincere appreciation to all of our stakeholders, including customers, employees, shareholders, and investors, for helping us achieve record-high net sales and operating income in such a major milestone year.

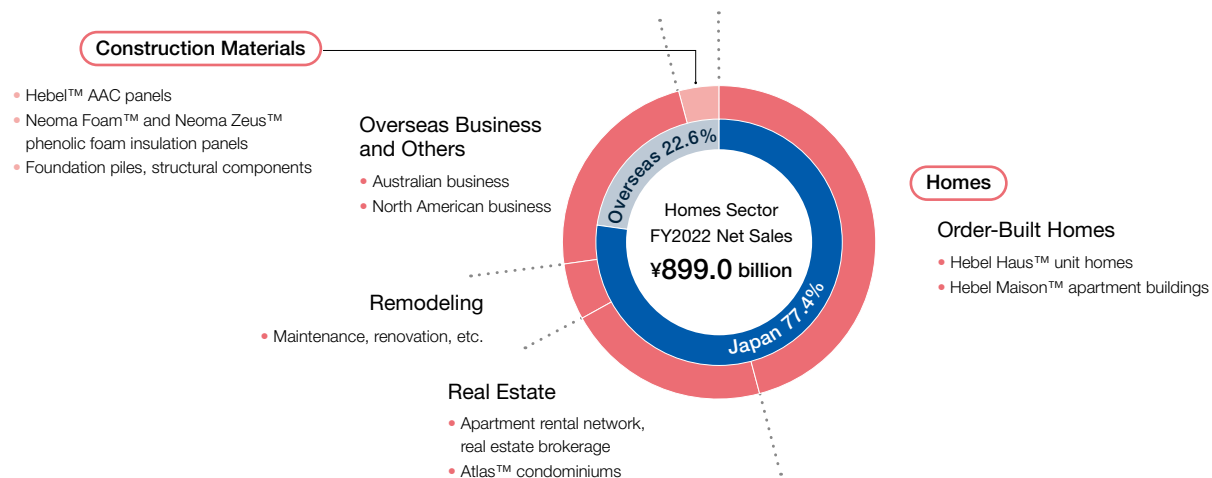
With the support of such customers, Hebel Haus™ has established a solid position in Japan's urban housing. In addition, the business has grown steadily in step with changes in society, including remodeling, leasing, brokerage, and condominium businesses, and promoted overseas homes businesses in recent years. The construction materials business has also played a role in realizing high value-added homes by making full use of the technological capabilities of Asahi Kasei's materials.

The homes business seeks to offer long-lasting homes where people can continue to live with peace of mind. Passed on since our founding, this aspiration precisely aligns with the concept of sustainable homes for the future. I am confident that we will see increasing demand in the coming era for the “Long Life” products and services that we provide to support life, well-being, and living for customers.

Profit Growth by Strengthening Domestic Businesses and Expanding Overseas Businesses

The growth of the Homes sector has contributed to society and raised the cash-generating capability of the Asahi Kasei Group. The current MTP targets net sales of ¥1 trillion and operating income of ¥95 billion for the Homes sector in fiscal 2024. While domestic businesses are securing earnings despite a challenging operating environment, including a declining population, our challenge is to firmly grow the overseas businesses, which are projected to see an increase in demand, in order to achieve these targets.

In recent years, we have made higher value-added proposals in the order-built homes business, such as homes for seniors and homes that protect the environment. We also promoted new marketing strategies for high-end products and conducted organizational reforms to fully leverage the strengths of Asahi Kasei Homes. As a result, despite greater-than-anticipated change in our operating environment—including higher construction material costs as an effect of global affairs—we were able to increase operating income from the previous fiscal year.



Message from the Head of the Homes Sector

In the overseas business in recent years we have made acquisitions in North America and Australia, where we aim to enhance the quality of homes and raise productivity using the know-how in industrialized housing development which we cultivated in Japan. In fiscal 2022, satisfaction with our progress in establishing new business models in both countries—where demand for homes is steady—led us to expand our North American business with the acquisition of the Focus Companies, a construction work supplier in Nevada, and our Australian business with the acquisition of Arden Homes Pty Ltd., a housebuilder in Victoria.

A Leader in Environmental Protection, Promoting Sustainability Together With Customers

In fiscal 2019, Asahi Kasei Homes joined RE100, an initiative for companies committed to sourcing 100% of the electricity used in their operations from renewable energy, in order to achieve decarbonization. Using a system whereby we purchase electricity generated primarily through solar power from customers, we expect to achieve our goal significantly earlier than initially anticipated. This achievement is based on the trust and expectations that customers place in the Asahi Kasei Group, and I feel that promoting sustainability together with them is highly meaningful. In addition, in fiscal 2023 our GHG emission reduction targets were approved by the Science Based Targets initiative (SBTi), a global body promoting GHG emission reductions, as consistent with the 1.5°C target, and we expressed our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). As one of the few companies to address all three of the TCFD, SBTi, and RE100, we are committed to faithfully fulfilling our role in society.

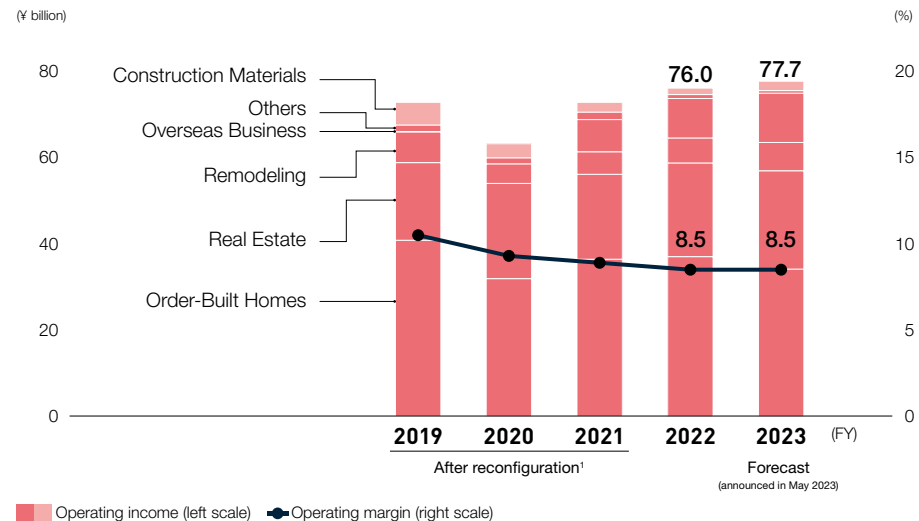
The vision of the homes business is to be an essential company of true value for customers, society, and employees as we embark on a new chapter following our 50th anniversary. People remain the source of value creation for the homes business in any era. We will therefore unstintingly invest in the growth of our employees to build an organization where all can feel proud and happy to work. We also aim to remain a company that is loved and depended on by all our stakeholders.

KPIs

	FY2021 (after reconfiguration ¹)	FY2022	FY2024 target (announced in Apr. 2023)
Net sales (¥ billion)	822.4	899.0	1,000.0
Operating income (¥ billion)	72.9	76.0	95.0
Operating margin	8.9%	8.5%	9.5%
EBITDA (¥ billion)	87.3	93.4	115.0
EBITDA margin	10.6%	10.4%	11.5%
Free cash flow ratio	4.5%	1.3%	4.0%
ROIC²	33.2%	27.2%	24.0%

Note: Shaded rows are management KPIs in the Homes sector

Operating income, operating margin



¹ Figures have been recalculated to reflect the revision of business categories in FY2022

² ROIC = operating income (1 – tax rate) / (fixed assets + working capital, etc.)



GG10 Environmental Homes and Construction Materials

Home & Living

Together with our customers, contributing to sustainability through homes

Operating Environment

Rapidly rising requirements for improved energy efficiency and decarbonization

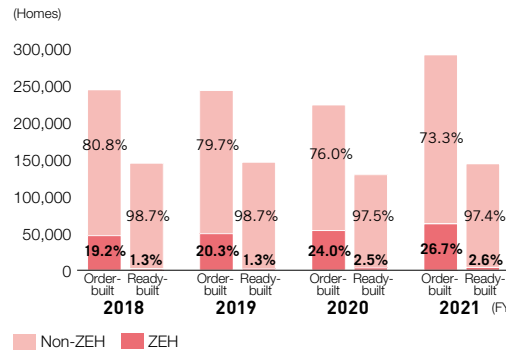
Although Japan has a sufficient quantity of housing units relative to the number of households, only a small percentage of homes fully meet energy efficiency performance standards. Updating to comfortable homes that can be passed on to the next generation has therefore become an urgent priority. Meanwhile, the Japanese government has declared its aim to achieve carbon neutrality by 2050 and to reduce GHG emissions by 46% by fiscal 2030 (compared with fiscal 2013). Against this backdrop, changes to relevant laws and revisions of programs are proceeding rapidly to further improve energy efficiency performance in homes and expand the introduction of renewable energy.

Government vision for homes in 2030

- New housing to have ZEH-level energy efficiency performance
- 60% of newly ordered unit homes to be equipped with solar power generation systems

At the same time, ZEH-compliant homes account for less than 30% of order-built unit homes and only a small percentage of ready-built unit homes. As a result, the role of home manufacturers with an already high proportion of ZEH compliance is becoming ever-more significant. In addition, installations of solar power generation systems and insulation materials are projected to expand in both the remodeling and new housing markets, and demand in the insulation materials market is expected to increase.

Spread of ZEH-compliant newly ordered unit homes



Source: Survey presentation materials from Sustainable open Innovation Initiative

Strengths of the Asahi Kasei Group

Housing units and customer relationships built through our "Long Life Home" concept

In addition to high levels of seismic and fire resistance, Hebel Haus™ homes have outstanding energy efficiency and power generation performance. In recent years, we have rapidly increased the number of ZEH-compliant Hebel Haus™ homes through our own unique value-added proposals, such as utilizing our Neoma Foam™ next-generation insulation, which maintains its superior insulation performance over the long term, and improving disaster resilience by encouraging the installation of solar power generation systems and storage batteries.

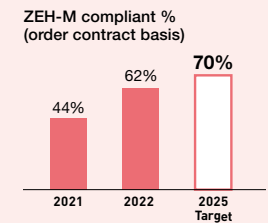
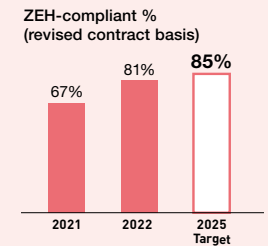
Another of our strengths is that many of the buildings we have constructed in the half-century since our founding remain standing thanks to the durability of our buildings and maintenance support with a periodic inspection service for 60 years free of charge. Leveraging synergies among businesses beginning from the order-built homes business, such as remodeling proposals tailored to the life stages of customers, support for moving and selling, and insurance and infrastructure proposals for approximately 290,000 housing units, we aim to pursue lifetime customer satisfaction.

Business Strategies

Aiming to promote the spread of ZEH- and ZEH-M-compliant homes and achieve RE100 as a leading company in environmental protection

The order-built homes business promotes unique initiatives, such as Eco ResiGrid, to increase the proportion of ZEH-M-compliant apartment buildings. For this product, Asahi Kasei Homes leases the roofs of Hebel Maison™ buildings to install, own, maintain, and operate solar power generation systems and storage batteries. In addition, the remodeling business seeks to promote the spread of solar power generation systems and storage batteries, and the apartment rental network aims for apartment buildings to provide greater value by promoting the use of clean electricity by tenants, as well as by owners and ourselves.

While promoting the spread of homes that protect the environment through these cross-business efforts, through our Hebel Electric Power business we purchase surplus electricity from customers who have installed solar power generation systems, allotting the purchased electricity for use in the business operations of the Asahi Kasei Group. Asahi Kasei Homes expects to achieve its RE100 goal of sourcing 100% of the electricity used in its operations from renewable energy during fiscal 2023.





GG10 North American and Australian Homes

Home & Living

Providing high-quality homes suited to each region; improving efficiency and productivity through industrialization

Operating Environment

Steady demand for homes owing to population increases and substantial opportunities created by labor shortages, long construction periods, and sluggish adoption of industrialized housing development

Given the sizes of their economies and population growth rates, we have promoted the overseas expansion of our homes business with a focus on North America and Australia. While housing demand has grown in recent years, the need to rationalize construction processes and reduce costs is becoming more acute amid chronic labor shortages and rising costs associated with increasing material prices.

U.S. Market

- The millennial generation represents a large portion of the population and has reached house-buying age. As such, residential housing demand is expected to remain firm over the medium to long term. Arizona and Nevada, our main operating regions, are states where an increasing number of businesses are located and where the population inflow from other states is particularly high.
- Although we began to see a slowdown in the market as a whole due to sharply rising inflation and mortgage rates in the second of fiscal 2022, newly built homes are on a recovery track in fiscal 2023, helped in part by a shortage of previously owned homes.

Australian Market

- Through a combination of natural growth and immigration, the population is projected to continue to increase by at least one million over the next three years. Accordingly, Australia is expected to enjoy steady growth in the housing industry over the medium to long term.
- Unprecedented construction demand stemming from subsidy measures triggered by the COVID-19 pandemic has led to a sharp rise in material and labor costs. Although the housing industry as a whole experienced financial difficulty in fiscal 2022, with construction delays due to adverse weather and other factors, resumed immigration is expected to alleviate labor shortages from fiscal 2023.

Strengths of the Asahi Kasei Group

Industrialized housing development, design, and construction expertise fostered through Hebel Haus™

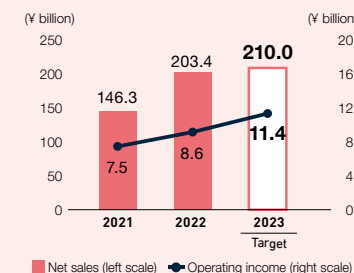
With quality controlled through the use of standardized components and materials and of prefabricated modules, Japan's industrialized housing is established as an exceptional form of industry compared with other countries. Above all, Asahi Kasei has developed frameworks for the efficient supply of high-quality homes, including developing Japan's first systematic three-story homes. As the development, design, and construction expertise fostered through these efforts spurs innovation in construction industries overseas, where construction periods can be nearly twice as long as those in Japan, it helps streamline construction processes and improve the quality of house building.



Business Strategies

Asahi Kasei improves and increases the efficiency of construction processes and enhances quality by working together with local companies with a strong understanding of the market, rather than simply introducing Hebel Haus™ in its Japanese format. In fiscal 2022, the overseas business achieved its fiscal 2025 target of net sales of ¥200 billion ahead of schedule. Going forward, we aim to achieve an operating margin on par with the level of 10% or more in our domestic business.

Net sales and operating income of overseas business



North America Establishing a supplier model to streamline a wide range of processes in manufacturing and on construction sites

In North America, we have acquired several companies in the homebuilding industry, most notably Erickson Framing Operations LLC, a building component supplier that manufactures and installs walls and roofs for wooden houses. We also acquired companies that perform electrical, concrete, and HVAC work, as well as plumbing work. With these acquisitions, we are working to make construction processes more efficient and enhance quality.

In fiscal 2022, we expanded our operating regions to include Las Vegas, Nevada, by acquiring the Focus Companies, a construction work supplier. In addition to a promising outlook for continuously steady demand for homes due to a chronic housing shortage in Nevada, we expect to create synergies with our existing business in Arizona.

Australia Establishing a highly competitive business model in Australia that builders or suppliers could not achieve alone

We are steadily growing our market share with a focus on NXT Building Group Pty. Ltd., a major unit homes company, by expanding our business regions to include New South Wales, where it was founded, and to other states through such methods as new acquisitions of builders.

In fiscal 2022, we advanced into Victoria for the first time with the acquisition of Arden Homes, a housebuilder in that state. Accounting for approximately 30% of the unit homes market—the largest share—Victoria is expected to enjoy a continuous demand for homes thanks to population increases, an abundant supply of building sites, and other factors.

Strategies by Sector

Health Care sector

Message from the Head of the Health Care Sector

Richard A. Packer

Executive Officer
for Health Care Business Sector
Primary Executive Officer,
Asahi Kasei Corp.
Chairman & Board Director,
ZOLL Medical Corporation
Board Director,
Veloxis Pharmaceuticals, Inc.

“ Toward a global healthcare company with diverse growth drivers

The Health Care sector is diversified, operating in fields ranging from critical care to pharmaceuticals and bioprocess. Four core operating companies, ZOLL Medical, Asahi Kasei Pharma, Veloxis Pharmaceuticals, and Asahi Kasei Medical, each aims to grow while pursuing the mission of “Improve and save patients’ lives.” The leaders of the core operating companies and I work closely together through the Healthcare Business Unit Meetings, where we discuss management issues, strategies, and prioritizing resource allocation from the perspective of the entire sector, in order to achieve medium- to long-term expansion as the growth driver of the Asahi Kasei Group.

Fiscal 2022 presented us with various challenges. There were macro factors such as raw material supply constraints and a slowdown in the U.S. biotech industry, along with challenges in managing our sales force and responding to fluctuating customer demands. As a result, net sales and operating income fell short of our targets.

In fiscal 2023, we have the opportunity to take a big step forward, overcoming the challenges of the previous year, particularly in critical care, and achieving a significant recovery in the Health Care sector as a whole. We are all focused on doing the work necessary, and making the hard decisions needed, in order to realize further growth.

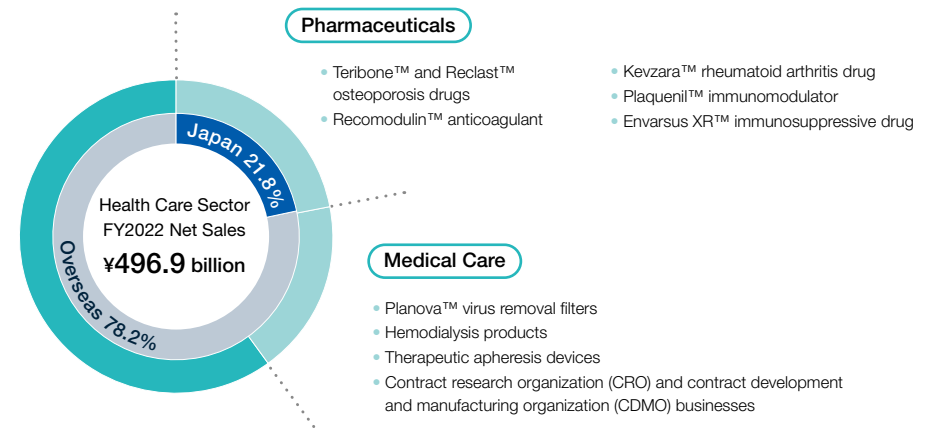
Pursue High Growth and Improved Profitability by Leveraging Strengths of Each Business

Our MTP goal is ¥590 billion in revenue and ¥60 billion in operating income for fiscal 2024, and in the long term, we aim to ensure an operating margin over 20%. This is an ambitious target which sets our agenda of expansion and growth while improving profitability, and we will develop strategies in each of our businesses to move us toward this goal.

By leveraging ZOLL's recent acquisitions of Respicardia and Itamar Medical, we will create new growth engines in critical care. We will maximize our opportunities by generating synergies between these companies and LifeVest™ in providing diagnostic and therapeutic solutions for sleep-disordered breathing related to cardiology. In addition, with TherOx™, which provides supersaturated oxygen therapy for acute myocardial infarction, we are working to create new markets with new solutions. We are accumulating data through clinical trials, promoting the therapeutic effects, and raising awareness among clinicians.

In pharmaceuticals, we aim to build a global specialty pharmaceutical business utilizing the foundations of Asahi Kasei Pharma and Veloxis. Combining the best knowledge of each organization in business development and clinical development, we will maximize our growth potential in core disease areas such as immunology and transplantation, and further expand our

- Acute Critical Care**
- LifeVest™ wearable defibrillator
 - Defibrillators for professional use
 - Automated external defibrillators (AEDs)
 - Ventilators
 - Thermogard System™ temperature management system
 - Supersaturated oxygen therapy
 - Implantable neurostimulator devices for central sleep apnea
 - Home-based testing and diagnostic solutions for sleep apnea



Message from the Head of the Health Care Sector

business scale. We will build globally while maintaining our strength in local geographies.

Another critical aspect of our medium-term strategy is to establish a bio-process business that offers a unique value proposition to the biopharmaceutical industry. By combining our products and services including CRO and CDMO, we can make significant contributions especially in terms of improving the safety and efficiency of pharmaceutical manufacturing. As we anticipate the recovery of the U.S. biotech industry, we will position ourselves intelligently to ensure product and service supply capability that enables us to move swiftly ahead when the market rebounds. We will continue to pursue growth in areas where we have strengths.

In implementing these strategies, we must prioritize investments and concentrate our resources on the businesses that will lead to growth which is sustainable over the long-term. With regard to DX, Asahi Kasei Pharma's digital marketing has received high acclaim, winning the Grand Prize in the Nikkei BtoB Marketing Awards, for example. The embrace of DX across all of our businesses will allow us to increase productivity while improving our ability to anticipate changing markets.

New Structure to Realize Further Innovation

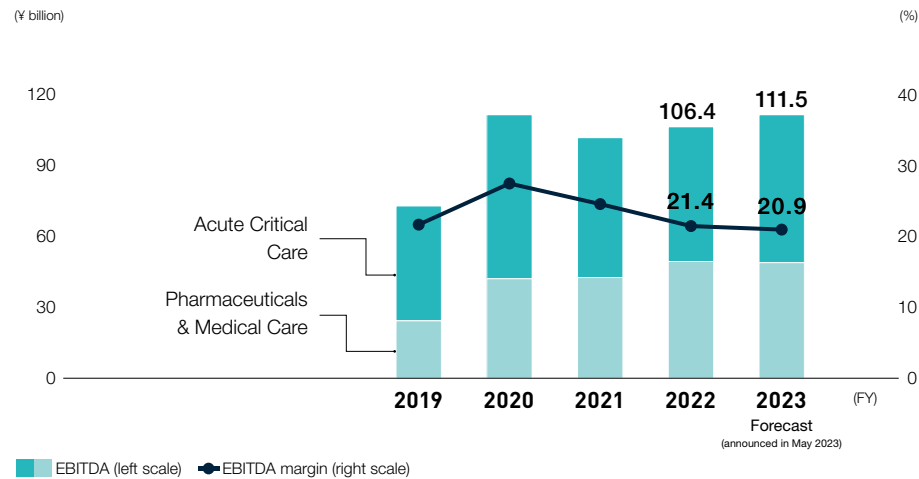
Looking beyond the immediate horizon, our vision extends to becoming a truly global healthcare company. As a step in this direction, in 2023 we established our headquarters for the sector in the U.S. By locating the headquarters in the world's largest healthcare market and the forefront of innovation, we can accelerate our growth through swift business development in anticipation of industry trends. Furthermore, from fiscal 2023, the Health Care sector is being led by a non-Japanese executive based in the U.S. This is a unique structure within Asahi Kasei and speaks to our commitment to change and grow as a Group. We continue to actively seek opportunities to address global issues in the healthcare industry and contribute to making a difference in the lives of patients worldwide, helping them in their pursuit of a healthier and more fulfilling life.

KPIs

	FY2021	FY2022	FY2024 target (announced in Apr. 2023)
Net sales (¥ billion)	415.9	496.9	590.0
Operating income (¥ billion)	52.2	41.9	60.0
Operating margin	12.5%	8.4%	10.2%
EBITDA (¥ billion)	101.7	106.4	126.0
EBITDA margin	24.5%	21.4%	21.4%
ROIC*	6.2%	4.2%	6.0%

Note: Shaded rows are management KPIs in the Health Care sector

EBITDA, EBITDA margin



* ROIC = operating income (1 - tax rate) / (fixed assets + working capital, etc.)

GG10 Critical Care

Health Care

Contributing to health by pursuing further growth in the field of serious cardiopulmonary diseases and saving as many lives as possible

Operating Environment

Substantial market potential in the field of cardiopulmonary disease

Heart disease is the leading cause of death in the U.S. and many other developed countries. There are increasing needs for critical care devices such as defibrillators to treat sudden cardiac arrest, as well as equipment for diagnosing and treating cardiopulmonary disease. Defibrillators include those implanted in the body and those that are used externally. External defibrillators include those used by healthcare institutions, automated external defibrillators (AEDs) placed in public facilities, and wearable defibrillators that are worn at all times by individuals at elevated risk of sudden cardiac arrest. When a person is in cardiac arrest, the chance of survival decreases by the minute. As such, it is important to further spread the availability of medical devices and systems for swiftly saving lives.

Additionally, in the field of cardiopulmonary diseases, as society ages and medical technology becomes more sophisticated, there is a growing potential market for products and services that respond to unmet medical needs in clinical settings.

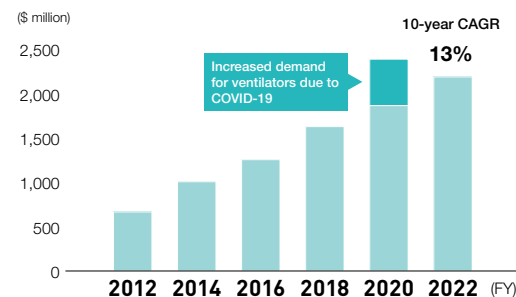
Strengths of the Asahi Kasei Group

A unique product lineup and strong network with medical institutions

Our subsidiary ZOLL Medical Corporation is a global medical device manufacturer specializing in medical devices and solutions for critical care, including cardiopulmonary resuscitation, and cardiopulmonary diseases. Since joining the Asahi Kasei Group, ZOLL has continued to grow its existing operations while acquiring new technologies and businesses through M&A, and its sales have risen approximately four-fold with a CAGR of 13% from 2012 to 2022.

One of ZOLL's strengths is its unique product lineup, which includes the LifeVest™ wearable defibrillator. The potential market for wearable defibrillators is estimated at \$3 billion in the U.S. alone, and a solid position has been built for LifeVest™ as a bellwether for developing new markets. LifeVest™ has been worn by more than 1 million people around the world and has saved thousands of lives. Another strength is a strong network with hospitals with a rich lineup of products for medical professionals, including defibrillators for medical institutions.

ZOLL's growth trajectory (sales)



Business Strategies

Business development and product portfolio expansion in cardiopulmonary diseases and related acute care fields

Patient services

While we aim to continue increasing market penetration of LifeVest™ and establishing it as a standard treatment, ZOLL has also expanded into new fields. In fiscal 2021, through the acquisitions of Respicardia and Itamar Medical, it acquired groundbreaking devices for the diagnosis and treatment of sleep apnea, which often occurs in patients with heart disease. Each has a potential market worth billions of dollars, and we will aim to achieve solid results by realizing synergies with existing businesses and accelerating entry into the sleep apnea market while developing and expanding these two companies.

Healthcare infrastructure

As a market leader in critical care products such as defibrillators for healthcare professionals and AEDs for public facilities, we will continue to invest in technological innovation and product and service development. In addition to diversifying our product portfolio, we aim to expand by steadily capturing global market growth outside the U.S.

Patient services business

- Global potential market of over \$10 billion
- Current market penetration of less than 10%
- Business growth rate in mid-teens
- 70–80% gross profit margin

LifeVest™ wearable defibrillator
Arrhythmia management system
Heart failure management system
At-home testing solution for sleep apnea
Implantable neurostimulator device for central sleep apnea



Healthcare infrastructure business

- Global market potential of over \$5 billion
- Leading positions in multiple product categories
- Business growth in high single digit range
- 50–60% gross profit margin

Ventilators
Defibrillators for professional use
Automated external defibrillators (AEDs)
Automated CPR device
Acute myocardial infarction treatment system
Thermogard System™ temperature management system
Software solutions



GG10 Global Specialty Pharma

Health Care

Accelerating our transformation into a Global Specialty Pharma business focused on immunology, transplantation, and related disease areas

Operating Environment

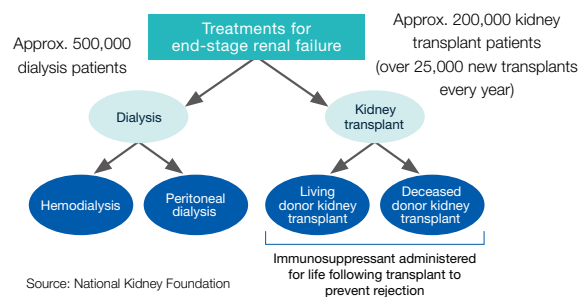
Paramount importance of the U.S. pharmaceutical market, the largest in the world, to growing the pharmaceuticals business

The global pharmaceutical market is expected to grow to the scale of \$1.6 trillion by 2025, with a compound annual growth rate (CAGR) of between 3% and 6% over the period from 2021 to 2025. During this period, the U.S. pharmaceutical market will continue to be the world's largest with a projected scale of between \$605 billion and \$635 billion in 2025.¹ This market features an ecosystem through which innovation is created as pharmaceutical companies, other companies, government agencies, academic institutions, drug discovery startups, and investors coordinate with other parties. Accordingly, our acquisition of a business platform in the U.S. market is expected to facilitate the further growth of our pharmaceuticals business.

Asahi Kasei focuses on markets related to kidney failure and kidney transplantation. In the U.S., one in seven adults or approximately 37 million people suffer from chronic kidney disease, and some 780,000 of them have end-stage renal failure. Compared with dialysis, kidney transplantation is a treatment that provides better quality of life for patients and is more economical from a healthcare standpoint. Around 25,000 kidney transplants are performed each year, and this number is projected to increase.

¹ Source: Global Medicine Spending and Usage Trends Outlook to 2025, IQVIA Holdings, Inc.

U.S. Kidney Failure and Kidney Transplant Market



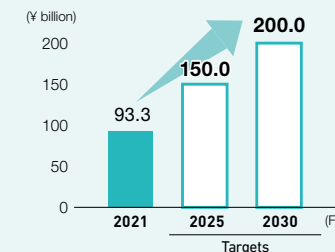
Business Strategies

Aiming for sales of ¥200 billion in the pharmaceuticals business, specializing in diseases related to immunology and transplantation

We will continue to pursue higher sales of Envarsus XR™, positioning this drug as a growth driver for the pharmaceuticals business on a global scale. We also aim to grow as a Global Specialty Pharma business by focusing on pharmaceuticals for large hospitals, with priority areas of immunology and transplantation, and related disease areas such as infectious diseases, renal diseases, and specialty areas. In addition, by deepening the collaboration between Asahi Kasei Pharma and Veloxis, we will further strengthen clinical development and business development functions such as M&A, in-licensing, and open innovation. At the same time, we will look to develop, launch, and expand sales of new drugs. This objective will be accomplished by strengthening our clinical and business development functions in the U.S., the world's largest pharmaceutical market and the forefront of pharmaceutical innovation.

At the same time, in the Japanese market, we plan to grow sales of existing pharmaceuticals while actively expanding our pipeline through in-licensing. For the pharmaceuticals business as a whole, we are targeting sales of ¥150 billion in 2025 and ¥200 billion in 2030.

Pharmaceuticals sales growth targets



Strengths of the Asahi Kasei Group

Veloxis immunosuppressant Envarsus XR™ steadily expanding market share

We supply Envarsus XR™, an immunosuppressive drug for kidney transplant patients, through our subsidiary Veloxis Pharmaceuticals, Inc. Envarsus XR™ employs a proprietary sustained-release tacrolimus formulation that limits the rise in maximum concentration of the drug in the bloodstream and maintains an effective concentration for a longer period of time, which allows the drug to be effective with a single daily dose. Another advantage is that our small group of highly skilled medical representatives (MRs) has acquired sales channels with specialists at major U.S. hospitals in the fields of immunology and transplantation. Envarsus XR™ has already been designated as a vital drug for kidney transplant patients by numerous leading-edge healthcare institutions in the U.S., and we are achieving smooth growth for this product with a fiscal 2022 share of more than 15% of tacrolimus applications and at least 30% of new kidney transplant patients. Sales volume growth slowed temporarily due to restrictions on MR activities during the COVID-19 pandemic, but has been steadily rising since fiscal 2022.



Region	Core Treatment Areas	Products	Global Specialty Pharma Targets	
Asahi Kasei Pharma			1 Disease areas adjacent to immunology/transplantation, specialty focused 	2 Hospital based (large number of beds)
Japan	Orthopedics	<ul style="list-style-type: none"> Teribone™ Reclast™ 		
	Critical care/hospital based	<ul style="list-style-type: none"> Recomodulin™ 		
	Immunology	<ul style="list-style-type: none"> Kevzara™ Bredinin™ Plaquenil™ 		
Veloxis Pharmaceuticals				
U.S.	Transplantation	<ul style="list-style-type: none"> Envarsus XR™ VEL-101 (former FR104) 		

GG10 Bioprocess

Health Care

Evolving into a premium partner that contributes to biologics safety and manufacturing efficiency for pharmaceutical companies

Operating Environment

Expansion of bioprocess-related markets with rapid growth of biopharmaceutical market

The emergence of more diverse and sophisticated drug discovery technologies is driving biopharmaceutical market growth in areas such as genetic recombination and cell culture drug development, and the market is expected to see a CAGR of 8% from 2022 to 2030. Furthermore, there is a shift to next-generation treatments such as cell therapy, gene therapy, and medium molecular weight drugs, and the bioprocess-related market continues to expand.

In these areas, the market for virus removal filters, which are used to reduce the risk of virus contamination during the pharmaceutical manufacturing process, a high rate of growth is expected to continue. For biopharmaceuticals, it is important to develop production processes that ideally match the characteristics of each formulation, and there is also a need to select the appropriate filter based on the requirements of the given process. For pharmaceutical companies, the presence of filter manufacturers that offer a broad product lineup and high product quality will become even more important going forward.

Strengths of the Asahi Kasei Group

Firm position staked out by our Planova™ virus removal filter

In 1989, Asahi Kasei released Planova™, a cellulose hollow-fiber membrane that was the world's first* virus removal filter to be developed for use during the manufacture of biotherapeutics. We have since gained a major global market share for this product. Our technology, which separates viruses with a high level of precision based on the size of membrane pores, has earned a strong reputation in the manufacturing process of biopharmaceuticals and plasma derivatives, and has expanded its market share. Moreover, we are able to offer technical support backed by scientific insight, the ability to make product proposals that accommodate customer needs, and the ability to provide stable product supply. This has enabled us to gain the trust of, and build a strong network among, pharmaceutical companies and key opinion leaders in the industry.

* According to research by Asahi Kasei



Business Strategies

Continuing to expand business by leveraging the customer base and brand

Investing in development and capacity expansion for Planova™

In fiscal 2022, we launched Planova™ S20N, a new product that aims to improve the operational efficiency of pharmaceutical processes in addition to its excellent filtration flow rate and superior virus removal properties.

Additionally, to meet growing demand, we are currently constructing a new Planova™ assembly plant in Nobeoka City, Miyazaki Prefecture, scheduled for completion in fiscal 2023. The new plant will be a "smart factory" that fully utilizes automation and digital technology to significantly improve quality and production efficiency.

Expanding into the CRO and CDMO businesses

Bionova Scientific LLC, a U.S. company acquired in May 2022, is a biopharmaceutical CDMO (contract development and manufacturing organization) that provides contract manufacturing process development and contract manufacturing services to pharmaceutical companies. Its strength lies in its extensive track record with complex next-generation antibody drugs, which are particularly difficult to manufacture. Bionova continually receives more inquiries from drug discovery startups located in its home state of California and other parts of the West Coast. Such inquiries tend to begin with small-scale R&D projects which major CDMO companies are unsuited to handle. To meet forecasted demand growth, we have decided to quadruple Bionova's pharmaceutical manufacturing capacity.

