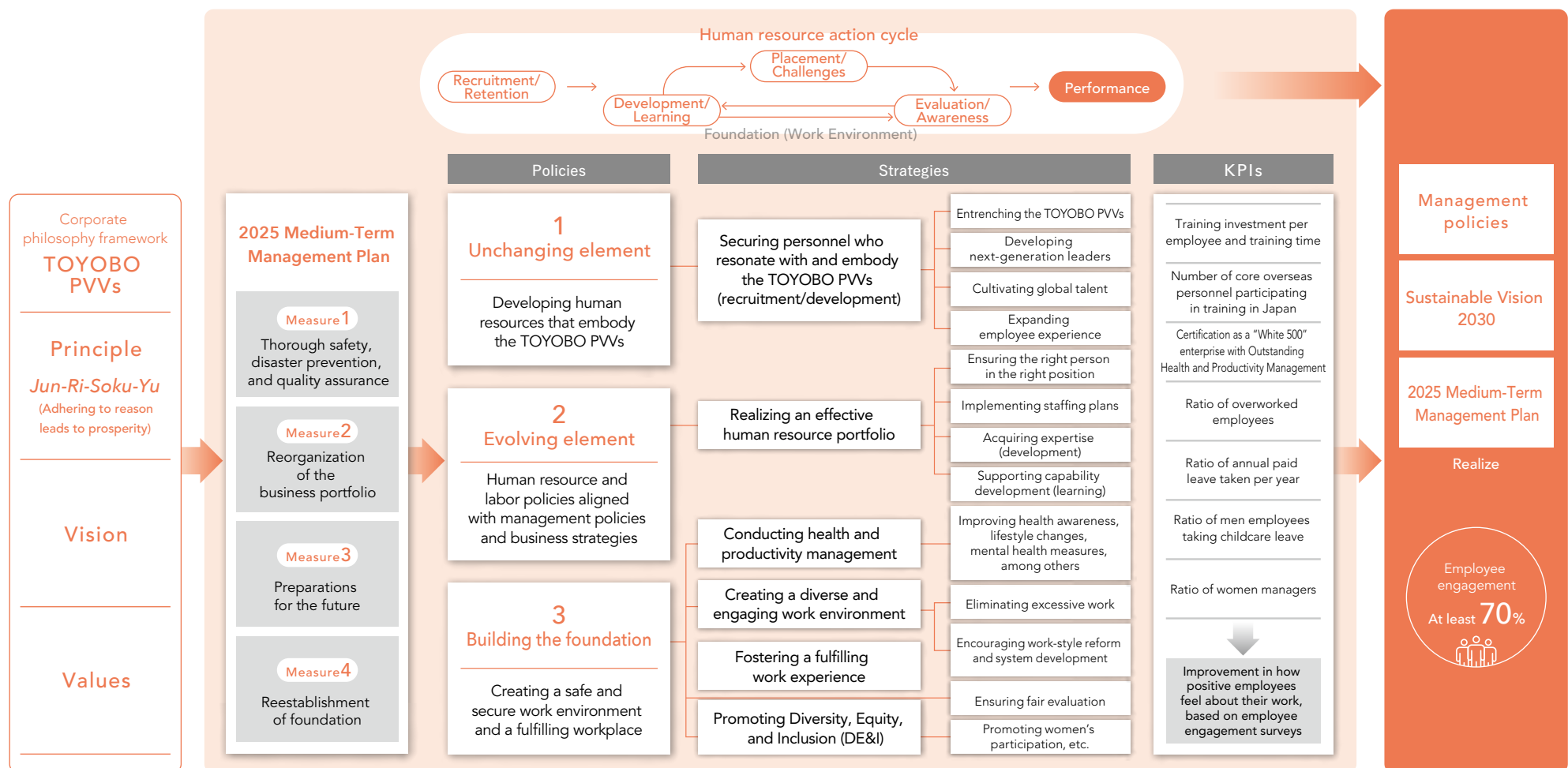


Human resource strategy

Human resource management policy

To achieve our management policies and business strategies based on the TOYOBO PVVs* corporate philosophy framework, it is crucial to recognize that people are our most valuable management asset. We are committed to creating a human resource management system that enables our employees to take pride and find fulfillment in their work. Specifically, we will establish a foundation based on the unchanging principle of embodying the TOYOBO PVVs, while continually evolving capabilities and expertise to adapt to changes in management policies and business strategies, thereby realizing a dynamic talent development cycle. At the same time, we will build a solid foundation for a work environment where employees can feel secure. We are confident that achieving these goals will lead to employee satisfaction and the sustainable growth of the group.

* Abbreviated term for Toyobo's Principle, Vision, and Values



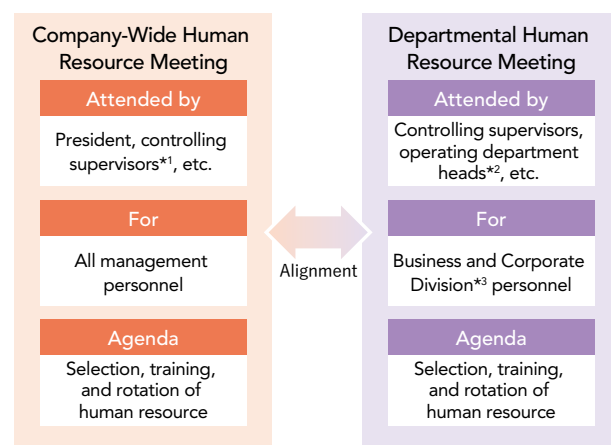
Human resource strategy

Human resource development

Human resource management

Cultivating the next generation of management

For Toyobo group's initiative to develop the next generation of management, we plan to provide selected personnel with internal and external executive development training. To further broaden their experience, we will also offer them opportunities to undertake business operations and management duties to refine their management skills, supporting our succession plan. The group operates the Human Resource Conference to discuss measures for developing next-generation management talent. This is further divided into two conferences: the Company-Wide Human Resource Meeting, which focuses on successors for management positions, and the Departmental Human Resource Meeting, which addresses successors for highly specialized roles. We implement actions including policy support for the development of successor candidates, as well as the selection and rotation of personnel. By coordinating these two conferences, we aim to uncover and develop next-generation management talent and enhance their effectiveness.



*1 Oversees each division and administration division

*2 Oversees specific fields across multiple business divisions

*3 Corporate divisions including corporate planning, management and administration, and human resources

Developing global human resource

Toyobo implements a short-term overseas business training program, sending around 10 employees from Japan abroad each year in two separate groups (first and second half of the year) for the objectives outlined below. To date, 72 employees have participated in this program. This initiative motivates younger and mid-career employees to engage in Toyobo's global business and represents a significant opportunity for them to advance their career.

Objectives

- Secure and systematically train personnel capable of developing overseas markets
- Unlike traditional language training, provide practical overseas training opportunities tied to current job missions, thereby expanding the pool of future overseas personnel

We also conduct a training program for local management candidates from our overseas group companies. These candidates come to Japan for training, and to date, 128 individuals have participated in the program.

Objectives

- Deepen an understanding of the group's corporate philosophy and management policies, while acquiring the necessary knowledge for managerial staff
- Enhance an understanding of the group and foster exchanges with employees from Japan and overseas through participation in internal training and visits to various business sites

Fostering self-reliant personnel

To reinforce the expected behaviors among employees so that they embody the TOYOBO PVVs, we encourage proactive skill development through a variety of training programs, including elective and open seminars, e-learning, and correspondence courses. We also support career growth aimed at cultivating self-reliant talent by offering training for management, during promotions, and for new hires and career advancement.

Human resource development achievements (FY2024)

Training hours per employee*	KPI	18.22 hours
Training investment per employee*	KPI	¥50,000
Total number of participants*		2,709
Total training hours*		43,340 hours
Training participation rate for career and skills*		62%
Number of core overseas personnel participating in training in Japan	KPI	7

* Boundary: TOYOBO CO., LTD., TOYOBO MC Corporation, and TOYOBO STC CO., LTD.

COLUMN

Employee Roundtable Discussion > p.24

Cultivating talent to embody the corporate philosophy

The corporate culture Toyobo group aspires to is expressed through the TOYOBO PVVs corporate philosophy framework. We aim to develop individuals and organizations that resonate with the philosophy of "Jun-Ri-Soku-Yu" (Adhering to reason leads to prosperity) and proactively pursue this enrichment. Our Values emphasize welcoming change, enjoying change, and creating change. Since its inception, the group has continuously adapted its business to meet evolving times and customer needs. We aim to foster individuals and organizations that anticipate societal and environmental changes and drive change proactively. To support this, we have established the TOYOBO Spirit: Nine Commitments, emphasizing Challenge, Reliability, and Collaboration as daily behavioral guidelines, integrating them into performance evaluations and internal recognition systems. To ensure these efforts are effective, the KAERU Department leads the initiative to promote the TOYOBO PVVs among employees. By providing platforms for two-way communication across departments and levels and enhancing relationships through dialogue, we focus on cultivating talent that can embody our corporate philosophy.

TOYOBO Spirit: Nine Commitments

Human resource strategy

Employee roundtable discussion

Perceptions of Sustainable Vision 2030 and specific actions being taken

Employees from various departments supporting Toyobo group gathered to discuss their perceptions of the corporate philosophy and vision. They shared their actions in alignment with these principles and their vision for the future as they work toward achieving the goals of Sustainable Vision 2030.



How do you perceive the vision and connect it to your daily activities?

Tajima I appreciate the concept of building a flourishing society with Toyobo's corporate philosophy framework, the TOYOBO PVVs.

Fujimoto Toyobo group has set an ambitious goal of achieving consolidated net sales of ¥600 billion under Sustainable Vision 2030. I understand that the key to realizing this goal lies in consistently overcoming the challenges we encounter.

Toyama As someone working in research and development, I place significant emphasis on the vision of continuously creating

solutions. As materials are a means to achieve these solutions, I always ensure that our development efforts begin with a clear understanding of the solutions our customers are seeking. This perspective is crucial for me as a researcher in a manufacturing company.

Iwasaki With its long history, Toyobo group is well-positioned to move forward into the future. I believe our vision reflects an approach of enriching the world through innovative thinking that transcends conventional ideas, and I deeply resonate with this mindset.

Yamanaka I continuously reflect on how I can contribute to achieving a prosperous future. Although there are major challenges such as water and food shortages, I concentrate on making small contributions to enhance the lives of our immediate customers and those beyond them. The vision acts as a guiding principle for these efforts.



What initiatives are being undertaken in each workplace to achieve the vision?

Yamanaka Toyobo group contributes to society by using packaging film technology to deliver fresh food over long distances, thereby helping to reduce food waste. Our pouches are designed to be easy to collect and recycle, extend shelf life with freshness-preserving barrier films, and be microwaveable. We are particularly focusing on expanding sales in overseas markets, including Southeast Asia and India.

Tajima The medical materials business brings smiles to patients by improving symptoms and aiding in recovery through our products. We developed hollow fiber membranes for artificial kidneys to make dialysis treatment more comfortable for patients.

Fujimoto Toyobo's BREATHAIR® supports healthy living and healthcare. To contribute to a circular economy, we have also started material recycling for collected products.

Toyama In my team, we are focused on developing technologies to address two of the five social issues outlined in Sustainable



Takatsugu Tajima

Medical Materials Operating Department,
Life Science Division

Mayu Fujimoto

Environment and Fiber Sales Domain,
Sales Division, TOYOBO MC Corporation

Kinuka Toyama

Research Center,
Innovation Division

Kana Iwasaki

KAERU Department,
HR and Administration Division

Yoshiyuki Yamanaka

Packaging Operating Department,
Films Division

Human resource strategy

Employee roundtable discussion



Vision 2030: achieving healthy living and realizing a decarbonized society.

Iwasaki Since being assigned to the KAERU Department*1 in November of last year, I have been working with my team to improve work efficiency and working methods, centered on the principles of the TOYOBO PVVs.

Tajima For the past two years, until April of this year, I served concurrently in the KAERU Department with Ms. Iwasaki and in the

Life Science Division. I plan to apply the experience gained from the KAERU activities, particularly the practice of setting and sharing deadlines for decision-making processes, to improve efficiency in my current workplace.

Fujimoto Until last year, I also worked concurrently in the KAERU Department. Being surrounded by many individuals with a mindset focused on driving change was truly inspiring. This experience heightened my awareness of improving the workplace, and I'm grateful for the opportunity to have participated in the KAERU activities.

Yamanaka The KAERU activities promote effective meeting procedures (Meeting Ways*2) and paperless operations, contributing to improved work efficiency.

Toyama I feel that creating many opportunities for interaction with people from different fields has improved communication across the company. By participating in the Mirai Human Resources Training Program and the interdisciplinary exchange event, TOYOBO Mirai Creation Community (MCC), I have had the opportunity to meet individuals outside of my usual daily work, which has broadened my perspective.

Iwasaki In the KAERU Department, we aim to enhance internal communication opportunities that were reduced during the COVID-19 pandemic and to promote the diffusion of the TOYOBO PVVs, supporting the realization of our vision.



Describe the atmosphere of your workplace. Also, in what situations do you feel a sense of fulfillment in your work?

Yamanaka At Toyobo group, there is a strong mindset focused on achieving something. Effective conversations are crucial for bringing ideas to fruition. For instance, when we aimed to sell our films internationally, I got the idea from a senior colleague of mine to start with a global company in Japan, which is a customer of ours, and then expand it to the world. This idea emerged from everyday conversation.

Tajima With the "people first" principle in mind, I demonstrated the Nerbridge® nerve regeneration conduit at our dialysis membrane factory at the Iwakuni Production Center last fiscal year. By showcasing technologies that support next-generation medical advancements, it also improves the engagement of factory staff. This fiscal year, we plan to highlight our corporate research.

Fujimoto In my workplace, everyone has a

strong commitment to BREATHAIR®, creating a sense of unity. I find fulfillment in the feedback we receive from customers every day.

Toyama The atmosphere in my team is characterized by a sense of openness, where researchers can easily consult with each other and take on challenges without fear of failure. This freedom contributes to our development speed. I felt a great sense of fulfillment when I learned that customers were interested in the results of our collaborative research with universities.

Iwasaki The KAERU Department has an open and communicative environment where feedback and expressions of gratitude are exchanged regularly. The ability to have close discussions with direct managers contributes to a comfortable work environment. By drawing out each individual's strengths, the department fosters a sense of fulfillment and increases motivation.



What kind of company would you like to create in the future as you work toward realizing the vision?

Yamanaka I focus on avoiding simple, obvious questions and answers, aiming instead for a unique perspective. This approach fosters competitiveness, value, and prosperity. As a mid-career professional, I want to bridge the gap between different generations and contribute to advancing new technologies and markets.

Fujimoto Ideally, I would like to be able to confidently recommend Toyobo as a great place to work to those searching for employment.

Toyama My goal is to build a company where hard work is rewarded. I want everyone to share the company's vision and make steady progress toward their individual goals and achievements, all while approaching their daily tasks with dedication and sincerity.

Iwasaki Through the KAERU activities, I aim to create a company where various internal opinions are respected and employees can work in a lively and enjoyable environment. This approach will naturally lead to people advocating for continuous improvement and positive change.

Tajima The establishment of the new Medical Research Laboratory and the hollow fiber membrane factory in Odate City, Akita Prefecture, reflect the company's growing expectations. To advance our operations effectively, it is crucial for all employees to take ownership of their roles. I believe that embracing responsibility in both work and life promotes personal growth. Ultimately, I aspire to achieve something that my children can be

proud of.



*1 KAERU Department: Established in 2018 as the KAERU Project Department, with the mission of transforming the workplace so that every individual can work confidently and energetically, and where the company continuously evolves while charting a growth trajectory. The department was renamed to its current title in April 2022.

Starting this year, the focus is on improving and reforming operations and enhancing communication skills as the two main pillars. "KAERU" means to change in Japanese. *2 Meeting Ways: Guidelines established internally for conducting meetings. Aimed at maximizing meeting outcomes, these guidelines focus on three key points: making effective use of time, enhancing the quality of discussions, and achieving results. The KAERU activities promote the implementation of these practices.

Human resource strategy

Promotion of DE&I

 Diversity, equity, and inclusion  Promoting women's empowerment

Materiality KPIs Items, targets, and fiscal 2024 results for employee well-being (DE&I, health and productivity management, occupational health and safety) > p.15

Basic approach

Toyobo group believes that personal and organizational growth is achieved through recognizing diverse values and respecting differing opinions among people with various work styles, careers, genders, nationalities, races, and beliefs, and through cooperation to achieve our shared objectives.

As stated in the TOYOBO Group Diversity Promotion Policy, Toyobo group believes that the happiness of its employees and the sustainable growth of the group stem from diverse employees being able to fully participate in the organization and society with pride and fulfillment. The group is committed to the promotion of diversity based on the following three elements: diversity, equity, and inclusion.

Promoting women's empowerment

Toyobo group established the Diversity & Inclusion Group within the Human Resources Department, dedicated to promoting women's empowerment. This organization holds events such as presentations, seminars for managers, women leader development seminars, and women's empowerment projects on a continuous basis at each business site, all aimed at fostering a shift in employee awareness.

We have also opened a Toyobo Nursery School within the Research Center in Otsu, Shiga Prefecture, to support childcare. This initiative facilitates an early and planned return to work from childcare leave and helps create an environment where employees can approach childbirth with peace of mind.

In recognition of our efforts, such as meeting the prescribed standards in areas like recruitment, continuous employment, work style including working hours, and diverse career paths, we received the Eruboshi Certification (Level 2) from the Minister of Health, Labour and Welfare in December 2021 for actively promoting women's participation and advancement. Beyond fostering an environment and organizational culture where women can thrive, we have also revised our policies to encourage men employees to

take childcare leave, which includes making five days of the leave paid. As a result, the childcare leave uptake rate exceeded 80% in fiscal 2021 and has remained high ever since.

In addition, in June 2023, we were certified as Platinum Kurumin in recognition of our various initiatives.

We will continue to implement various measures centered on these initiatives to ensure that employees can work with peace of mind.



Promoting employment of persons with disabilities

To raise the employment rate of persons with disabilities, it is crucial to implement initiatives at a company-wide level. We therefore share information on the employment status and actively encourage the recruitment of persons with disabilities during the quarterly meetings of the General Administration Department managers from each business site.

As part of efforts to improve working environments, we have made the offices at the Tsuruga Research and Production Center and the Inuyama Plant barrier-free. We are also progressively renovating other business sites to ensure that they are barrier-free.

To meet the rising statutory employment rate in the future, we are actively recruiting. Alongside recruitment, we are taking steps to prevent turnover. This involves gradually assigning tasks from various workplaces to help new employees adapt to the environment and ensuring they are placed in positions suited to their skills and abilities.

Promoting employment of senior employees

After reaching the retirement age of 60, re-employed senior employees set goals and achieve results just like regular employees. They also play an active role in developing younger staff and passing on skills and knowledge.

LGBTQ+ initiatives

To foster a work environment where diverse talents, including gender minorities, can thrive, we have implemented the following initiatives.

Actions implemented	Details
Consultation desk	Toyobo has established an LGBTQ+ consultation desk. To ensure a worry-free experience, we guarantee strict privacy protection, including confidentiality of individuals seeking consultations. We also assure that there will be no repercussions for employees who seek advice or report issues, and we accept anonymous consultation requests.
Furthering use of preferred names	Starting from fiscal 2025, we have introduced a system that allows the use of preferred names based on gender identity. This enables individuals to use their chosen names that align with their gender identity.
Training for operational staff	We provided LGBTQ+ training to all operational staff, including those in the Human Resources Department, deepening their understanding of sexual minorities and the prohibition of outing, creating a supportive environment where they can engage in their work with a sense of security.
Unisex uniforms	In fiscal 2023, we made all standard uniforms worn in manufacturing sites unisex.
Gender-neutral restrooms	We have completed the installation of restrooms that can be used regardless of gender across all sites (excluding certain tenant-occupied locations).
In-house awareness activities	In addition to addressing this theme in relevant training sessions, we regularly post information on our internal portal to deepen the understanding of LGBTQ+ issues. We are also working to foster an LGBTQ+-friendly culture within the group.

DE&I related achievements

(FY2024 results)

Ratio of women managerial staff	KPI	5.5%
Rate of paternity leave uptake by men	KPI	97.7%
Employment ratio of persons with disabilities*	KPI	2.29%

Boundary: TOYOBO CO., LTD., TOYOBO MC Corporation, and TOYOBO STC CO.

* Boundary: TOYOBO CO., LTD.

Human resource strategy

Feature

Harnessing diversity and creating value

New insights gained through integration with different cultures

Toyobo group has experienced integration with different cultures through numerous M&As, continuously evolving by embracing new insights and diverse perspectives. In this section, we will introduce a case of value co-creation through an M&A in the film business conducted five years ago.

Integration from the perspective of the Human Resources Department

Toyobo was established through the merger of Osaka Boseki and Mie Boseki and has since experienced several major mergers, including with Osaka Godo Boseki and Kureha Boseki. In recent years, we have carried out M&As with Shinko Sangyo Ltd. and Toyo Kasei Kogyo Co., Ltd., leading up to the merger in the film business that we will introduce here. Thus, the history of the group reflects a continuous integration of diverse business cultures. Among these integrations, the merger with Teijin Film Solutions Limited (TFS) and P.T. Indonesia Teijin Film Solutions (ITFS) has represented a significant milestone for our film business. We have had numerous presidents, directors, and executives who were not originally from Toyobo, and there are no factions or academic cliques within the company. As a result, we take pride in ensuring fairness

in the human resources domain for the approximately 500 individuals (including those based overseas) who have been transferred through the merger.

Integration with Teijin's film business

In 2019, with the goal of combining the distinctive technologies and product lineups of our film business with those of Teijin Limited to establish a unified and efficient system for providing highly functional film products to our customers, we made TFS and ITFS

wholly owned subsidiaries. Subsequently, in 2021, we absorbed TFS through a merger.

Efforts toward creating new value through the mutual learning of technologies

A notable difference between the technologies of both companies was the coating technology for mold releasing film for MLCC. Toyobo's strength lies in its fine-tuning technology for high-end applications, which enables the production of thin and highly smooth films.

Conversely, TFS excels in mass production technology for middle- to low-end applications. Recognizing these differences in target applications and approaches to technology development was essential. This recognition marked the beginning of our efforts toward value co-creation through the integration of different cultures.

Achieving sustainable value co-creation

Toyobo group believes that embracing diverse values and perspectives, and collaborating to achieve common goals, fosters growth for both individuals and the organization. As demonstrated by the case presented, which reflects DE&I principles, we strive to enhance corporate value through sustainable value co-creation by harnessing and integrating individual strengths to mutually uplift one another.

Post-integration progress and synergy realization

Runa Nakamura

General Manager, Katata Films Technology Center

Career Joined Toyobo four years ago as a mid-career recruit and is engaged in film research and development

I believe this integration has been a significant step toward future innovations by allowing us to learn from each other's technologies. Each company uses different technologies to achieve the same goal of developing films with coating applications, and I am hopeful that this integration will uncover new added value. Initially, there were challenges due to cultural differences, but we addressed these by clearly articulating our thoughts, acknowledging each other's strengths and weaknesses, and engaging in discussions, as needed. I now feel that the integration with TFS is no longer a challenge, and interacting with another company's culture and perspectives has provided an opportunity to view our own company objectively. By embracing diverse opinions, we can move forward in a better direction.

Shinji Yano

Group Leader, Katata Films Technology Center

Career Transferred from TFS to Toyobo and is engaged in film research and development

Initially, I was unsettled by the differences in the scope of research and development roles between the two companies. For example, at Toyobo, it is rare for development personnel to interact directly with customers, whereas at TFS, where individual roles were broader, such interactions were frequent. While direct contact with customers has the advantage of timely understanding of their needs, it also has the disadvantage of preventing a focus solely on development tasks. In contrast, at Toyobo, manufacturing, sales, and development each specialize in their respective areas while maintaining strong coordination. This approach has provided me with a new perspective on how to efficiently create high-quality products by entrusting tasks to specialists in different areas rather than covering all roles alone.

Kento Shigeno

Katata Films Technology Center

Career Joined Toyobo as a new graduate and is engaged in film research and development

In the beginning, I was confused by the differences in technical terminology. However, by adapting to both sets of terms as needed and maintaining ongoing communication, we managed to overcome this challenge. We also encountered differences in work methods and approaches. To address these, we focused on understanding the differences, discussing each other's strengths and weaknesses, and then deciding on a course of action. We further collected data and reevaluated what we each considered "standard," leading to valuable new insights. Rather than conforming to a single culture, the mutual understanding and collaborative development of a new, enhanced culture truly showcase the synergy we achieved.



Human resource strategy

Improving the working environment



Safety and disaster prevention



Health and productivity management



Human resource management

Safe and secure workplace

1 Strengthening occupational health and safety

Toyobo group adopts the slogan, “Protect yourself. Protect your colleagues. If you notice something, speak out.” We are dedicated to prioritizing safety across all aspects, environmental safety occupational health, product safety, and equipment safety. To realize this commitment, we focus on two main policies: fostering a culture of safety and fortifying our safety infrastructure. To foster a culture of safety, we implement safety dialogues, conduct safety awareness surveys, and hold tiered workshops. To fortify safety infrastructure, we promote the 3S (Sort, Set in Order, and Shine) principles in the workplace and have established disaster prevention training facilities where employees can experience the impact of disasters through simulation equipment. These facilities are used for training both within the company and for external participants.

Safety and disaster prevention related achievements (2023 results)

Number of major accidents	KPI	0
Work-related injury absenteeism rate	KPI	1.15
Number of fires and explosions	KPI	0

Boundary: Total of TOYOBO CO., LTD., and its domestic consolidated subsidiaries

2 Promoting health and productivity management

Toyobo group believes that investing in employee health and fostering a vibrant workplace where employees can work energetically drive the company's long-term growth. Therefore, we strategically implement health management from a managerial perspective, focusing on enhancing both the physical and mental well-being of our employees to boost health and productivity.

Initiatives

- Support for employees based on health checkup results, including encouraging follow-up examinations, health guidance from health staff, and health consultations
- Health and productivity management support for expatriates
- Mental healthcare efforts, including training for managerial staff and return-to-work support
- Awareness activities through seminars and other means for employees
- Measures to reduce long working hours
- Recognized as a “White 500” enterprise for Outstanding Health and Productivity Management for two consecutive years



3 Achieving work satisfaction

We believe that aligning organizational goals with individual growth is crucial, viewing the company and employees as equal partners. Since 2021, we have conducted the organizational culture and job satisfaction survey for all officers and employees. This survey allows us to regularly assess employee engagement and foster an environment where employees can take pride in their work and proactively contribute to their roles. In addition, to enhance engagement, we aim to achieve an employee engagement score of at least 70% by 2030 through the following initiatives.

Initiatives

- Establish a system to align overall policies and strategies with individual goals
- Implement job inventory caravans through KAERU activities
- Visualize and understand individual careers and work satisfaction
- Develop a system for conducting annual engagement surveys starting from 2024

Work environment related achievements

Improvement in employees' affirmative responses about work based on the engagement survey

(Results are from FY2023; there was no survey in FY2024, but one is planned for FY2025)

Percentage of respondents who do not feel that their day-to-day work is difficult to perform*	KPI	38% +5% YoY
Percentage of respondents who respect the diverse views and ideas of each person*	KPI	50% +8% YoY

* Boundary (as of FY2023): TOYOBO CO., LTD., TOYOBO STC CO., LTD., TOYOBO INFORMATION SYSTEM CREATE CO., LTD., and TOYOBO TEXTILE CO., LTD.

Certification as a “White 500” enterprise with Outstanding Health and Productivity Management	KPI	Certification as a Health and Productivity Management Outstanding Organization 2024 (large enterprise category) Attained “White 500” certification (FY2024 results)
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COLUMN

Implementation of a new personnel system

To enhance talent management, we have introduced a new personnel system alongside revised HR policies. This system consolidates several previously separate HR systems into one, with full-scale operation starting in June 2024. This integration aims to support talent management both functionally and operationally, boosting our adaptability and responsiveness over the long term.

We will specifically enhance talent management by improving capabilities in areas such as talent information visualization and succession planning. Plans include exploring global and cross-group initiatives. In addition, we have updated our methods for managing working hours and revised some HR policies to enable employees to work more autonomously and efficiently. We will continue to refine the working environment to foster safer, more autonomous, and diverse working practices.

Innovation strategy

Message from the Controlling Supervisor of the Innovation Division —Toyobo's unique innovation—

Katsuya Ito

Executive Officer
Controlling Supervisor
of the Innovation Division



Solving social challenges through the integration of diverse sciences

Toyobo group's business began with natural fibers and developed into chemical fibers and synthetic fibers. It then evolved into films, environmental and functional materials, and life science. This progression aligns with our group's vision to continuously create the solutions needed by people and the planet through materials and science. Here, "science" refers to a body of knowledge acquired through scientific methods, encompassing not only natural sciences but also social sciences and humanities. In other words, "materials and science" represents our philosophy of addressing social challenges by integrating all the knowledge and wisdom that the group possesses into our products (materials). By bringing together the expertise of not only engineers but also various specialists within and outside the company, we can develop new added value and solutions.

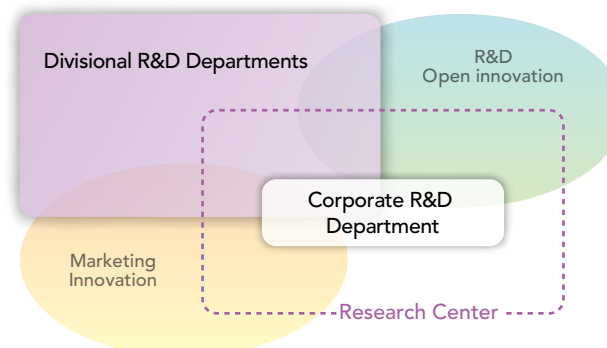
Promoting company-wide collaboration to drive innovation

The Innovation Division plays a central role in the company-wide activities for driving innovation. One of the foundations of Toyobo group's innovation creation is our research and

development efforts, which are undertaken by the Divisional R&D Departments and the Corporate R&D Department. While the Corporate R&D Department focuses on core technology research, aiming to acquire fundamental and advanced technologies for the future, as well as developing new products and businesses across divisions, the Divisional R&D Departments are responsible for developing products that reflect the current and future needs of our customers. Despite their different roles, they share the common goal of creating innovations based on science to propose technologies, products, and services that benefit our customers.

In both corporate and divisional R&D, we emphasize company-wide collaboration in our operations. Through the Innovation

Company-wide innovation system through collaboration between Corporate and Divisional R&D



Promotion Council, where representatives from both departments gather, we share not only the overall status and progress of each department's innovation activities but also how we are addressing ever-changing societal demands. In addition, we provide opportunities for discussing the selection of themes, development processes, and commercialization. Development leaders from each department participate in reporting sessions, primarily led by the Corporate Research Center, where they engage in discussions on delivering new added value and solutions.

Importance of fundamental research

Many of the R&D departments in the group are staffed by engineers with expertise in natural sciences. Therefore, I encourage them to delve deeply into technology while fully understanding the group's vision. Deepening expertise is crucial for talent development, and a solid foundation will enhance one's ability to grasp and apply new technologies, even if it requires time. From past experiences, I have learned that inadequate scientific backing is a contributing factor to quality issues and product defects. With a science-based intuition, ethical standards, and a strong philosophy, one can exercise self-discipline to avoid deviations from fundamental principles, make accurate decisions, and progress effectively.

At the Corporate Research Center, we continuously explore new development opportunities alongside our ongoing development

Innovation strategy

Message from the controlling supervisor of the Innovation Division –Innovation the Toyobo way–

activities. We stay abreast of both internal and external technological information and social environments, constantly examining new possibilities. We also share information with the business divisions from the early stages of development, ensuring that our activities are always aligned with market needs, ultimately leading to effective solutions.

A recent example of our collaboration with universities is the development of Vitrimer, a resin with dynamic covalent bonds and an associative bond exchange mechanism. By leveraging the unique properties of vitrimers, which can respond to pressure and heat like thermoplastic resins while maintaining the cross-linked state of polymers, we have successfully created an eco-friendly, high-heat-resistant adhesive sheet that is solvent-free and can be transported and stored at ambient temperatures. This achievement represents a successful integration of university technology with the group's core resin technology and is now in the product evaluation stage with customers.

We also support fundamental research outside of the company. The TOYOBO POLYMER SCIENCE Award, established in 2021, is a public research grant system that supports young researchers by utilizing the research funding framework operated by Leave a Nest Co., Ltd. While there is a current trend toward supporting applied research, Toyobo group focuses on fundamental and general research in polymer science as the theme for our grants. We aim to highlight and support fundamental research that, even if initially unknown, is essential for the evolution of materials that can potentially change the world. This research is essential for pursuing the fundamental functions necessary for such transformative advancements.

Toyobo's strength in nurturing accumulated expertise

While it is important to develop with a goal in mind, Toyobo group has often succeeded by valuing and nurturing accumulated expertise. For example, the film business, which I have been involved with for many years, began in 1963. Initially, it started with films for food packaging and processing technologies, followed by base films for magnetic tapes. This led to the development of industrial films such as COSMOSHINE® and eventually the advanced super retarder film COSMOSHINE SRF®. The evolution of these highly functional materials has been made possible by the continuous accumulation of knowledge, including raw material resins and film-forming technologies, as well as ongoing interactions with customers. This ability to significantly grow accumulated expertise is a key strength of the group. However, recognizing opportunities for solutions is also crucial. In talent development, we emphasize the importance of providing hands-on experiences, including learning from failures, and creating opportunities for insights daily.

Co-creating innovation with our customers

To accelerate innovation, there are valuable lessons to be learned from how global companies operate. For example, Tesla applies its approach of releasing products early and then iterating and upgrading them when an issue emerges, even in the realm of hardware such as automobiles. We often think that products must be close to 100% complete before they can be commercialized, but this is an area where we should reconsider our approach. In addition, there are U.S. start-ups that have achieved rapid growth

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The fusion of diverse expertise and perspectives across the company leads to new added value and solutions.

”

by selling water in “cool” packaging at a premium price. If we can align with innovative perspectives on marketing, branding, and other aspects, we too can add new value to something as conventional as water, breaking away from traditional norms. The group also possesses materials developed beyond conventional norms. For example, IZANAS®, an ultra-high-strength polyethylene fiber, is made from the same polyethylene as supermarket checkout bags. However, through the group's technology, we have enhanced its strength to be comparable to steel, and it is now used for tanker mooring ropes. Recently, it has been employed in offshore wind power demonstration projects. Even commonplace materials can evolve into high-performance materials when pushed to their limits.

In the examples of global companies mentioned earlier, innovation is not only about offering unique technologies or ideas but also about uncovering potential customer needs and co-creating value with customers. Similarly, we will leverage our established technologies based on the concept of “materials and science” and incorporate new ideas generated from diverse perspectives both within and outside the company. This approach will enable us to create innovations that transcend conventional thinking. While there are instances where a single genius, like Edison, can drive innovation, in a corporate setting, diverse perspectives and talents across different functions and roles contribute to the creation of varied innovations. I believe that the fusion and accumulation of these diverse strengths can lead to the emergence of unexpected solutions and added value. With this mindset, I am committed to driving innovation in Toyobo group.

Innovation strategy

Utilization of intellectual property

 About intellectual property

Materiality KPIs Items, targets, and fiscal 2024 results for innovation and compliance (R&D and intellectual property) > p.16

Policy and vision

Toyobo group aims to continue creating solutions required by people and the planet through materials and science. By creating innovations based on our four core technologies of polymer technology, biomedical technology, environmental technology, and analysis and simulation technology, we contribute to resolving social issues.

In addition, we align our intellectual property activities with our business strategy and research and development strategy, and ensure the superiority of our products by building a high-quality patent portfolio, including both core and peripheral patents.

Targets and KPIs

Effective utilization of intellectual property is key to ensuring the superiority of our products. Therefore, we set KPIs and manage them appropriately. In fiscal 2024, the initiatives for which KPIs were set included the number of intellectual property analyses conducted, the number of business terminations due to patent infringement, the number of intellectual property training sessions for employees, and the number of orders issued for corrective measures on displayed materials.

Initiatives

1 Establishing a framework

- The progress of KPIs is reported twice a year at the Sustainability Committee, where we ensure alignment with Toyobo's overall policies and advance our intellectual property activities.
- In collaboration with the business departments and the research and development departments, we assign intellectual property liaisons to each department to enhance the effectiveness of our intellectual property activities.

2 Formulating policies for patent management

- By actively securing and utilizing our innovations as intellectual property rights, such as patents, we aim to stabilize our business and achieve high profitability, thereby contributing to the sustainable growth of the group.
- We strengthen our own patents while respecting the patents of others through patent review meetings and patent reviews linked to design reviews.
- We actively pursue international patent applications in line with our business plans.

3 Use of intellectual property information

We actively analyze patent and non-patent information to derive insights into technological and market trends, which we then apply to our business and R&D strategies.

4 Use of digital technology

We will introduce an AI system to enhance the efficiency and accuracy of the screening process during freedom-to-operate analyses in patent reviews. This process ensures that newly developed products or technologies do not infringe on other companies' patent rights during research and development.

5 Invention incentive system

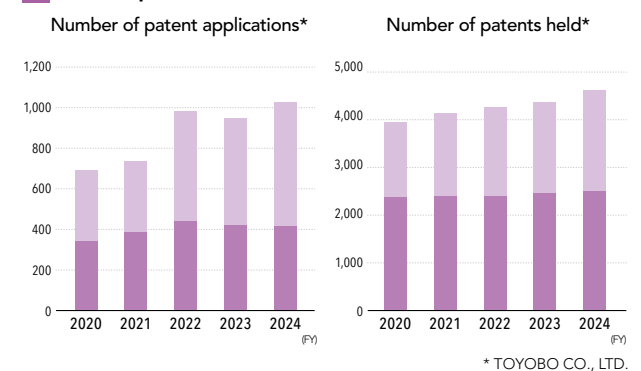
To enhance employees' innovation mindset, we have established an invention incentive system.* If a patent application is filed, inventors will receive an incentive payment as reasonable compensation for their work-related inventions. In addition, if a patented invention is implemented, inventors will receive a reward payment.

* In June 2024, we revised the invention incentive system. Previously, rewards were based on the contribution of patents to the company's profits. The updated system now provides a uniform reward payment for the implementation of patented inventions, regardless of the profit amount. Moreover, greater emphasis will be placed on incentive payments at the time of patent application. This revision is expected to enhance the motivation for creating new inventions.

6 Implementation of intellectual property education

- We conduct systematic intellectual property education tailored to job categories and functions.
- We hold practical patent seminars for engineering-related employees during their first three years of employment to enable them to learn about patents. We also offer specialized education focused on patent searches and the preparation of patent application documents, including practical, hands-on training.
- Sales personnel also receive education on the intellectual property knowledge necessary for their roles.

7 Patent performance



For fiscal 2024, the number of patent applications was 1,029, with 615 of these being international. The total number of patents held was 4,624, with 2,109 of these being international. Toyobo ranked first in the total patent ranking for polymer film-related technologies, as announced by Patent Result Co., Ltd., on May 7, 2024.*

* This ranking focuses on polymer film-related technologies and is based on Patent Result's evaluation of patent scores (assessing the degree of attention given to individual patents) in four major countries and regions: Japan, the United States, Europe, and China.

Innovation strategy

Digital transformation

Policy and vision

Toyobo group aims to continue creating solutions required by people and the planet. We address both current and future challenges by driving business innovation and striving to accelerate transformative changes within our operations.

Digital transformation (DX) is crucial for advancing and accelerating business innovation, and understanding its contribution to business expansion is key. By establishing IT infrastructure and developing a robust DX promotion structure, the group is advancing human resources and organizational transformation to enable business co-creation. We are committed to pursuing our 2030 objectives: contributing to solving issues facing people and the planet, being a company where employees work with pride and satisfaction, and achieving sustainable growth.

Initiatives to advance DX

In fiscal 2024, we completed preparations for achieving DX in line with the DX road map formulated in fiscal 2023. These preparations included the overhaul of our information security infrastructure, the initiation of the open systemization of core systems such as sales, and the reorganization of the digital promotion department, which involved the absorption and merger of our information subsidiary (TOYOBO INFORMATION SYSTEM CREATE CO., LTD.).

As a result, Toyobo group was recognized for meeting the Ministry of Economy, Trade and Industry's certification standards for DX initiatives and was selected as a DX-certified operator in February 2024. In fiscal 2025, we will expand our efforts group-wide with the perspectives of transforming to achieve agile responses through simplicity and streamlining, and pursuing thorough efficiency through standardization, thereby accelerating our DX initiatives. In addition, to prepare for further expansion of digital technology applications in business operations, such as AI, we will focus on measures centered on building a cycle for accumulating and creating data assets.

Focus Area 1

IT infrastructure development

Toyobo group is advancing investments in updating legacy systems. In fiscal 2024, we began pilot implementation of a new core online system, with plans to complete cloud computing and security enhancements by fiscal 2027.

We will also progress with the renovation of peripheral systems associated with the new IT infrastructure, building a secure and flexible IT foundation that enables data utilization and collaboration not only within departments and the group but also with external partners.

After completing the system updates, we will expand investments in DX projects that contribute to business growth, for example. By fiscal 2031, we aim to establish an IT environment capable of securely sharing information with any future partners with immediacy.

Focus Area 2

Governance and organizational strengthening

In fiscal 2024, as we shift from IT utilization to the DX era, we leveraged our organizational strength in system development and operations to focus on strengthening non-manufacturing organizational functions. This included co-creation theme development with business divisions and external partners aimed at business expansion, and shifting from localized optimization to holistic thinking. We will enhance our framework to optimize IT investments through planning and budget management and continuously reduce IT costs through cost management. To contribute effectively to business expansion, we will focus on human resource development, fostering a culture where each employee can independently plan their career, set goals, and engage in their work with a sense of purpose, as well as undertake organizational reforms.

Focus Area 3

Promotion of business co-creation

In the Sales and Marketing Division and the Innovation Division, our activity policy is to advance digital and IT themes that contribute to business expansion and promote digital transformation through business process reforms. Alongside infrastructure development directly related to manufacturing as a manufacturer, we set priorities for resource allocation based on business impact while overseeing the entire Sales and Marketing Division and strive for its overall optimization. Discussions that were previously conducted individually by field personnel are now addressed in regular meetings led by top management in this division to achieve overall optimization.

In addition, addressing environmental issues such as carbon neutrality and chemical substance management, as well as human capital, is a theme that the company should tackle. The IT and DX Planning Department will lead the company-wide efforts in setting goals and building systems, ensuring steady progress in these areas.

Green strategy

Creating environmental value through business

Toyobo group aims to achieve prosperity by addressing societal challenges with a global perspective through its Sustainable Vision 2030. As part of its green strategy, the group will focus on two main areas: a decarbonized and circular society, and quality water, air, and soil, and the preservation of biodiversity. We will provide solutions in these areas to create environmental value.

1 Employee well-being and human rights in the supply chain

2 A healthy lifestyle and healthcare

3 Smart communities and comfortable spaces

4 A decarbonized and circular society

5 Quality water, air, and soil, and the preservation of biodiversity



Sustainable Vision
2030

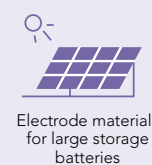
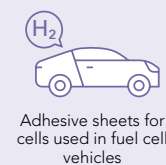
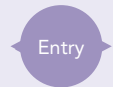
A decarbonized society

Issues

- Addressing climate change as a top priority for planet
- Providing various solutions that contribute to realizing a decarbonized society

Toyobo group can contribute by

- Expanding sales of products with significant CO₂ reduction contributions
- Entering the market of osmotic power and wind power generation



A circular society

Issues

- Transitioning to a resource-circulating society as a manufacturer dealing in plastic products
- Establishing and joining ecosystems for circulating resources

Toyobo group can contribute by

- Reducing plastic usage and improving recyclability through volume reduction and mono-materialization
- Developing catalysts to enhance the recyclability of PET
- Entering the business of recycling used plastics across different industries



Ratio of green films*
60%
* Use of biomass or recycled materials, and volume reduction



Quality water, air, and soil, and the preservation of biodiversity

Issues

- Providing solutions to ensure water, the atmosphere, and soil are in good condition
- Contributing to "nature positive" solutions (preventing and restoring biodiversity loss)

Toyobo group can contribute by

- Reducing environmental impact and improving quality through volatile organic compound (VOC) recovery equipment and water treatment membranes
- Expanding sales of highly functional films that help reduce food loss



Green strategy

Creating environmental value through business

 News release

Provision and development of materials for next-generation mobility

Mobility Business Strategy Unit, TOYOBOK MC Corporation



Akio Tange
Group Manager,
Advanced Development Group



Keisuke Taniguchi
Advanced Development Group



Hiroki Okajima
Advanced Development Group



Kengo Takimoto
Pre-Sales Group



Shinnosuke Minamoto
Pre-Sales Group

Environmental issues to address

In the automotive industry today, there is demand for reducing emissions, electrifying vehicles, and using renewable materials to lower environmental impact.

As a group, we aim to develop and provide high-value-added products that contribute to solving the environmental challenges faced by our customers.

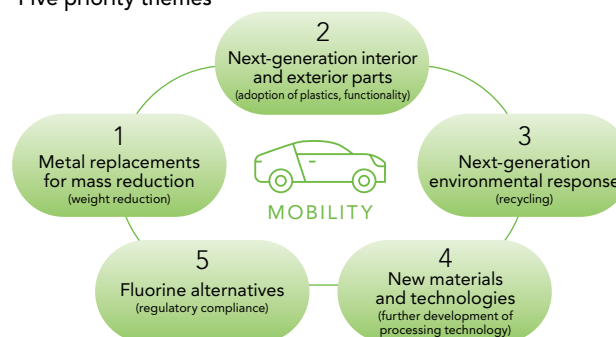
Background and objectives of establishing the Mobility Business Strategy Unit

TOYOBOK MC Corporation (TMC) established a new organization, the Mobility Business Strategy Unit, in April 2024 to directly approach and collaborate with original equipment manufacturers (OEMs) on joint development projects. The mobility industry is experiencing rapid technological innovation and dramatic changes in its business environment, with new entrants from various industries and emerging manufacturers. TMC's mission is to never stop transforming, and this bold shift in thinking is also required for the mobility industry. The new unit aims to grasp the needs of OEMs from the early stages of development and work closely together to bring high-value-added products to the global market.

Five priority themes

The Mobility Business Strategy Unit has established five priority themes. Each of these themes serves to comply with increasingly stringent regulations, such as fuel efficiency standards and recycling ratio mandates, and forms the foundation of TMC's competitive advantage. Furthermore, achieving these themes not only contributes to solving environmental issues but also serves as a testament to its technological capabilities, directly enhancing its market value.

Five priority themes

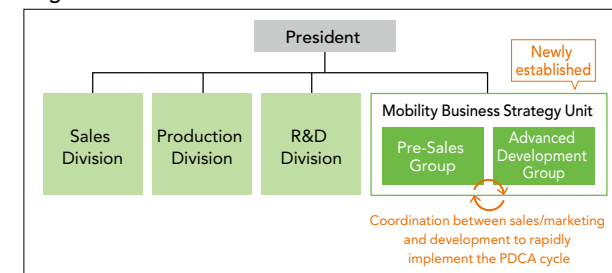


Operating structure

The Mobility Business Strategy Unit is a unified organization for sales and development, reporting directly to the president, and is

composed of specialists. This structure allows for swift decision-making and execution, enabling the unit to quickly leverage its accumulated technological expertise in response to the rapidly changing economic environment and global markets. In the mobility business domain of the TMC group, the unit has set a sales target of ¥100 billion by fiscal 2031.

Organization structure



Enhancing corporate value for both OEMs and Toyobo

In the past, there was a tendency to complete product development within the group. However, by moving away from this approach and collaborating with OEMs and other companies, we can create synergies that elevate the corporate value of both parties. Through these joint efforts, Toyobo group and OEMs aim to promote the development and widespread adoption of next-generation mobility solutions.

Green strategy

Creating environmental value through business

Expansion of biosurfactant MEL

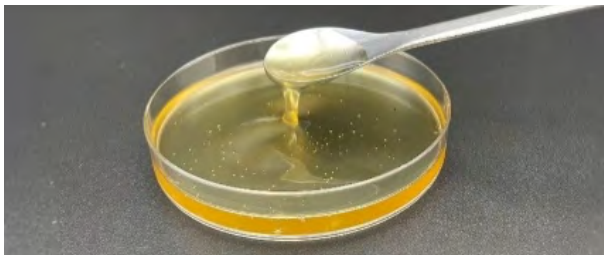


Environmental issues to address

In response to environmental challenges such as reducing greenhouse gas (GHG) emissions and the use of fossil resource materials, there is a growing need for new, sustainable manufacturing technologies that differ from traditional chemical production processes based on fossil resources. These technologies involve using genetic modification techniques to produce useful substances from cells of microorganisms, plants, and animals. One such example is Toyobo's mannosylerythritol lipids (MEL), which has been adopted under the Bio Manufacturing Revolution Promotion Project by the New Energy and Industrial Technology Development Organization (NEDO).

Development background of MEL and the impact of NEDO adoption

Development of MEL began around 20 years ago as a raw material for functional cosmetics using biotechnology. Toyobo discovered that ceramides, lipid components that protect skin moisture, have a structure similar to MEL, a naturally derived component produced by microorganisms (yeast). This similarity has highlighted MEL as a promising sustainable surfactant in the cosmetics industry. The adoption of MEL in the fiscal 2024 NEDO project has accelerated research, expanding its potential applications beyond cosmetic ingredients. This development significantly enhances the possibility of contributing to a decarbonized and circular society.



Biosurfactant, mannosylerythritol lipids (MEL)



Atsushi Sogabe

Head of Biotechnology
Operating Department,
Life Science Division



Takumi Arakawa

General Manager,
Biotechnology Development
Department

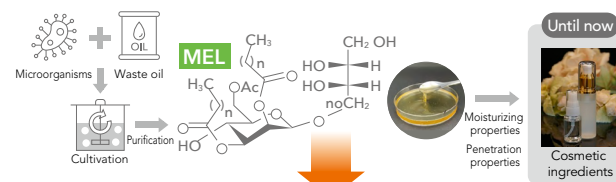


Chikako Yamashita

Biotechnology Development
Department

Features and strengths of MEL

MEL is commercialized as a moisturizing ingredient in cosmetics, but it also possesses excellent surfactant properties even at low concentrations. It is naturally derived, ensuring advanced safety and biodegradability. Moving forward, we aim to develop a revolutionary production system to reduce production costs. By around 2025, we plan to introduce MEL in high-value applications such as pesticide adjuvants that reduce chemical pesticide usage, feed additives that lower methane emissions from cattle, and coatings for hygiene products, thereby contributing to its broader societal implementation.



From now

Examples of alternatives to synthetic surfactants and other applications



Pesticide adjuvants



Feed additives



Coatings for
hygiene products

Social impact and enhancement of corporate value

Surfactants are used in a variety of products, including pharmaceuticals and processed foods such as fish paste, emulsifiers, and surface treatment agents. While many commercially available surfactants are derived from fossil fuels such as petroleum, providing naturally derived surfactants through biotechnology is expected to contribute to the realization of a decarbonized and circular society. Toyobo holds several patents for MEL, and we anticipate that improvements in productivity will significantly expand our business scope into areas such as agriculture, pharmaceuticals, and film processing.

Enhancing Toyobo's corporate value

Toyobo has recently initiated an eight-year plan for MEL, which has been in research and development for about 20 years. Beginning in February 2024, this new development plan will focus on establishing a high-precision continuous cultivation system. While we are currently trailing behind Europe and the United States globally in this field, we view it as a vital endeavor for generating value for Toyobo and Japan's future.

Business strategy

Roundtable discussion with Division Heads and the Controlling Supervisor of the Innovation Division

Value co-creation through innovation practice

The leaders of three business divisions and the Controlling Supervisor of the Innovation Division discussed how to co-create value through various collaborations aimed at commercializing Toyobo group's unique technologies.



Muneo Hirooka
Managing Executive Officer
Head, Films Division

Takahito Sagara
Managing Executive Officer
Head, Life Science Division

Chikao Morishige
Co-COO
Head, Environmental and Functional Materials Division
President & Representative Director, CEO, TOYOBO MC Corporation

Katsuya Ito
Executive Officer
Controlling Supervisor of
Innovation Division

Addressing social issues targeted by each division

Hirooka In the Films Division, which handles plastic products, reducing environmental impact on the Earth is a critical issue. While advancing efforts to reduce the use of fossil fuel-derived materials and greenhouse gas (GHG) emissions, we aim to achieve a 60% green film ratio in 2030 through increasing the use of recycled materials and utilizing bio-based materials. For example, food packaging films contribute to reducing food waste, and we are developing significantly thinner films that maintain performance, thereby leading to a reduction in plastic usage.

Sagara The Life Science Division's business is directly related to human health and well-being. With two main areas—diagnostic reagents and medical devices—there is a growing global demand for enzyme materials used in diagnostic reagents that simplify diagnostics. To address supply shortages, we are enhancing our production facilities. For hollow fiber membranes used in blood dialysis and blood purification medical devices, we are

building an integrated production system in collaboration with our pharmaceutical partner, NIPRO CORPORATION, to improve precision and provide products at appropriate prices.

Morishige The products handled by the Environmental and Functional Materials Division cover a wide range of areas including mobility, high-speed communications such as 4G and 5G, environmental sectors like air and water, and renewable energy. All of these contribute to solving societal issues. For example, membranes used for desalinating seawater not only help reduce wastewater by effectively utilizing concentrated seawater but also contribute to recycling by extracting and recovering valuable metals. Devices that capture volatile organic compounds (VOCs) from factory exhausts also help reduce environmental impact. In the field of renewable energy, we are also involved in developing super fibers suitable for floating offshore wind turbines.

Ito While these business divisions are advancing development in areas with high certainty, my role overseeing the Innovation Division is to create technologies, products, and business models in areas that will drive future revenue and span across different divisions. There are two main streams of development: one that started more than 140 years ago with natural fibers and

progressed through chemical fibers, synthetic fibers, plastics, and environmental and functional materials, and another that evolved from enzyme technology into life sciences. By promoting the evolution and expansion of each technology and integrating both technologies, we aim to create new business opportunities.

Co-creating value across divisions

Morishige At TOYOBO MC Corporation (TMC), we are advancing material development for film applications in mobility coatings in collaboration with the Films Division. We are also focusing on development that incorporates recycling technologies and biomass materials.

Hirooka In creating unique added value such as reducing film thickness and enhancing material strength, collaboration with the Innovation Division is essential. For example, when business divisions express the need for high-strength PET materials or ultra-clean raw materials, we discuss these requirements with the Innovation

Business strategy

Roundtable discussion with Division Heads and the Controlling Supervisor of the Innovation Division



Division, which then evaluates them. The results are tested and assessed by the business divisions, ensuring close coordination.

Sagara In the field of life sciences, we also accelerate development by complementing research through the exchange of research members and collaboration with the Innovation Division on topics such as biocompatible polymers.

Ito As the Innovation Division, we ensure that our research and development align with market needs by sharing the concerns of each business division and customer feedback. We also integrate information and insights from universities and specific ventures to set relevant challenges.

Open innovation beyond company boundaries

Morishige At TMC, we are advancing the development of new polymer materials by leveraging academic insights and technologies. Accurately understanding user needs is crucial for subsequent monetization efforts.

Ito I also believe that monetization should be a key consideration. In the Innovation Division, we are careful not to fall into the mistaken belief that research and development, being future-oriented, doesn't need to consider monetization. We always focus on how the group's core technologies can ultimately benefit our customers, ensuring that our efforts align with the overall direction and strategies of the group.

Hirooka Challenges such as recycling cannot be fully addressed by our group alone, so we are also collaborating with other companies. For example, we participated in the establishment of R Plus Japan, Ltd., a company focused on recycling used plastics, which was jointly funded by 12 companies* across different industries. In addition, we are involved in a resource circulation project with pharmaceutical and printing companies to horizontally recycle label mounts, further advancing our efforts.

Sagara We are also advancing research and development in collaboration with external partners to supply products with high precision, speed, and at a low cost. To meet the growing global demand, we jointly established an integrated production plant for dialysis devices with NIPRO CORPORATION, which began operations in April 2024.

* As of the establishment of R Plus Japan, Ltd., in 2020.

Toward creating social and environmental value

Hirooka Most of the products from the Films Division relate to everyday environments, such as food, electronic components, and mobility. Our vision is to create sustainable living environments by mastering materials and introducing new innovations and ideas, bringing smiles and inspiration to people worldwide.

Sagara The Life Science Division also focuses on bringing

smiles to people and continuously delivering unexpected value by providing innovative experiences beyond their aspirations. We emphasize developing our people, as offering opportunities is crucial for growth. As part of this effort, we have initiated projects that encourage turning crazy ideas into business ventures using biotechnology.


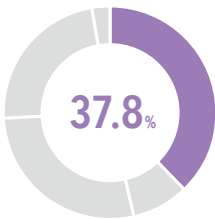


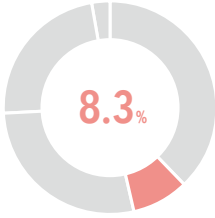


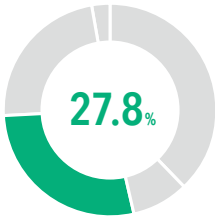


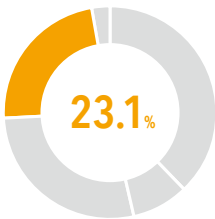

Morishige Human resources are truly invaluable assets. At TMC, we prioritize dialogue within the organization, including between management and employees, and focus on developing talent capable of driving self-transformation. We adhere to the TOYOBO PVs and have set our vision as solving global challenges with highly functional materials. As the chemical industry undergoes restructuring upstream, we aim to establish our value as a key intermediate materials manufacturer, ensuring that when customers face challenges in this field, we are their first point of contact.

Ito Although large-scale initiatives can signal the creation of new value, I believe that the seeds of innovation are often right in front of us. The key is in how we nurture these opportunities. The trial-and-error processes in development, discussions within and beyond the company, and ongoing experiments with customers are all crucial in sparking innovation. I want to emphasize the importance of recognizing and cultivating these moments to ensure we don't overlook any potential opportunities.

Business strategy

Overview by segment

 Contribution through business

		Consolidated net sales composition ratio	Net sales and operating profit (¥bn)	Main applications	Examples of products
Films 	<p>In the industrial film business, sales of polarizer protective films for LCDs increased significantly, while sales of mold releasing film for multilayer ceramic capacitors (MLCC) struggled as a full-fledged recovery in demand failed to materialize, affected by inventory adjustments. In the packaging film business, while we worked on product price revisions, we faced increased challenges due to soaring raw material and fuel prices, delays in demand recovery, and the start-up costs for new production equipment.</p>		Net sales 156.5 Operating profit 2.7	<ul style="list-style-type: none"> • Industrial films • Packaging films 	
Life Science 	<p>In the biotechnology business, demand for reagents for PCR testing declined significantly. In the medical products business, sales of artificial kidney hollow fibers performed strongly. In the contract manufacturing business of pharmaceuticals, profitability improved due to a decrease in costs for responding to good manufacturing practices (GMP), including manufacturing and quality control standards for pharmaceuticals, following the lifting of the Warning Letter by the U.S. Food and Drug Administration (FDA).</p>		Net sales 34.6 Operating profit 4.4	<ul style="list-style-type: none"> • Bio-related products • Cosmetic ingredients • Medical separation membranes and modules • Medical equipment • Pharmaceutical-related products 	
Environmental and Functional Materials 	<p>In the resin and chemicals business, engineering plastics sales increased with the recovery in automobile production. Sales of industrial adhesives declined for electronic materials applications in the Chinese market. In the environment and fiber business, sales of VOC recovery equipment used in the manufacturing process for lithium-ion battery separators increased. In the high-performance fibers business, sales for fishing line applications were weak. Nonwoven materials were affected by both reduced sales for hygiene products and civil engineering and building materials, as well as soaring raw material and fuel prices.</p>		Net sales 115.3 Operating profit 4.7	<ul style="list-style-type: none"> • Adhesion and coating agents • Engineering plastics • Elastomers • Seawater desalination membranes and modules • Environmental solution equipment and filters • High-performance fibers • Lifestyle materials 	
Functional Textiles and Trading 	<p>In the textile business, profitability improved due to progress in price pass-throughs, in addition to reforms of business structure such as the consolidation of production bases in Japan and discontinuing unprofitable products. In the airbag fabric business, profitability also improved because of product price revisions and increased sales volume with the recovery of automobile production.</p>		Net sales 95.7 Operating profit ▲1.0	<ul style="list-style-type: none"> • Airbag fabrics and yarn • Sports, inner wear, uniforms, and other apparel 	

Business strategy

Films

Muneo Hirooka

Managing Executive Officer
Head of Films Division



Realizing a decarbonized and circular society through comprehensive strength and organizational capability



Business overview and market environment

The films business is composed of two areas: industrial films and packaging films, both of which hold top-class market shares domestically.

The industrial film sector covers a wide range of applications, including display, electronic components, automotive, and labels. Notably, COSMOSHINE SRF® stands out for its superior water resistance compared to other materials and holds a significant market share as a polarizer protective films for LCDs. In addition, mold releasing film for multilayer ceramic capacitors (MLCC) leverage the strength of integrated film production and processing, and ongoing equipment investments have bolstered supply capabilities, supporting market growth. The packaging film sector primarily focuses on food packaging and contributes to solving customer challenges through its diverse range of resins, film production and processing technologies, and development capabilities. Being a pioneer in introducing biomass and recycled films to the industry has been highly regarded in the market.

Despite ongoing changes in the business environment, such as increasing societal demands for reducing plastic waste, rising

raw material costs, and the yen's depreciation, we view the growth of the market for environmentally friendly films (green films) aimed at a circular economy and carbon neutrality, as well as the expansion of the functional film market driven by advancements in the digital society, as significant opportunities.

Business features and strengths

This business is equipped with the technology to handle a wide range of materials and to carry out integrated development and production processes, from raw materials to film production and subsequent processing, such as coating and vapor deposition. By maintaining close connections with both domestic and international customers, we tackle the challenges and issues they present. This involves the collaborative efforts of our sales, development, and manufacturing teams to create new added value.

Business strategies and initiatives in the 2025 Medium-Term Management Plan (MTP)

For the final year of the 2025 MTP, fiscal 2026, we are targeting ¥170 billion in net sales and ¥10 billion in operating profit. For fiscal 2031, the targets are ¥220 billion in net sales and ¥18 billion in operating profit. To achieve the 2025 MTP goals, specific measures include 1) Increasing production and expanding sales of highly functional films; 2) Expanding environmentally friendly films; 3) Developing and launching new films; and 4) Implementing appropriate pricing strategies. Although capital investment and the market introduction of new products are progressing generally as planned, due to the surge in raw material prices and exchange rate impacts

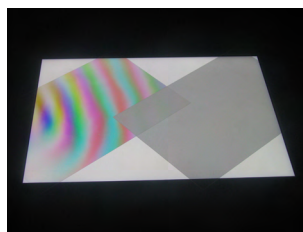
fiscal 2024 results were limited to net sales of ¥156.5 billion and operating profit of ¥2.7 billion.

By steadily implementing the aforementioned measures, we will regain our earning power.

In the long term, we aim to significantly increase sales of environmentally friendly films and challenge ourselves to provide solutions beyond material sales, thereby contributing to sustainable living environments.

Initiatives to achieve prosperity

People	<p>Efforts toward employee well-being and human rights in the supply chain</p> <ul style="list-style-type: none"> ● Fostering employee safety and job satisfaction ● Achieving zero accidents and disaster prevention (recognized as the most critical issue for our business foundation)
Planet	<p>Efforts toward quality water, air, and soil, and the preservation of biodiversity</p> <ul style="list-style-type: none"> ● Contributing to the reduction of food loss through highly functional packaging films that maintain food freshness <p>Efforts toward resource circulation</p> <ul style="list-style-type: none"> ● Developing a recycling system for mold releasing films for MLCC, involving collaboration with electrical and electronic manufacturers ● Actively participating in cross-industry resource circulation efforts, including a resource circulation project for horizontal recycling of label liners using KAMISHINE NEO® mold releasing film, in collaboration with pharmaceutical companies and the printing industry.
Prosperity	<p>Contributing to business growth by widely supplying highly functional and environmentally friendly films, while supporting the advancement of the digital society and the realization of a decarbonized and circular society</p>



Polarizer protective film,
COSMOSHINE SRF®



Coating equipment for mold releasing film
for MLCC
Tsuruga Films Plant Coater Building

Business strategy

Life Science

Takahito Sagara

Managing Executive Officer
Head of Life Science Division



Aiming to bring smiles to everyday life
and deliver unexpected value across
the globe through our business

Business overview and market environment

The life science business is divided into three areas: biotechnology, medical materials, and contract manufacturing of pharmaceuticals. The biotechnology segment focuses on raw enzymes and diagnostic reagents and systems related to clinical testing. The medical materials segment deals with materials for treatments, such as dialysis membranes. The contract manufacturing of pharmaceuticals segment involves the production of pharmaceuticals under contract from pharmaceutical companies. Specifically, the business includes high-value-added products with unique technologies, such as a diagnostic system that reduces PCR test processing time by half and hollow fiber membranes for artificial kidneys. In the raw enzyme business for biochemical diagnostic reagents, such as those used for measuring triglycerides and cholesterol, we hold a significant market share. The market is steadily growing due to economic growth in emerging countries, prompting us to make planned investments to meet the rising demand for raw materials. Moreover, with the number of dialysis patients worldwide exceeding four million and increasing annually at a rate of 6%, we established a new facility in Odate, in collaboration with NIPRO CORPORATION, in April 2024. This facility can conduct the production of dialysis membranes for artificial kidneys, from processing to commercialization. We aim to enhance productivity to support our membranes in regions expected to see an increase in dialysis patients, particularly in developing countries.



Artificial kidney hollow
fiber membranes

Business features and strengths

This business operates under the highest levels of production systems (QMS and GMP*) in the medical and pharmaceutical fields, aiming to bring smiles to everyday life and deliver unexpected value across the globe. We focus on two core technologies to meet customer needs at various stages of health:

advanced protein production technology in the biotechnology sector and membrane production technology in the medical materials sector, continuously honing our strengths in these areas.

* Quality Management System (QMS) and Good Manufacturing Practices (GMP)

Biotechnology business: Technology for producing high-performance proteins such as enzymes and antibodies

By leveraging our advanced microbial culture and protein purification technologies, along with genetic recombination technology, we achieve large-scale production of high-purity enzymes and the development and manufacturing of high-performance diagnostic reagents using these enzymes. This business aims to capture end-user needs and strive for the development of even better enzymes and antibodies, as well as diagnostic and research reagents utilizing these technologies.

Medical products business: Membrane production technology

This business develops and manufactures high-performance dialysis membranes using membrane structure control technology gained from developing hollow fiber membranes for artificial kidneys. In addition to creating superior dialysis membranes that meet the treatment needs of patients and facilities both in Japan and abroad, it aims to develop separation materials for other applications, such as pharmaceutical processes requiring specific separation and purification.

Business strategies and initiatives in the 2025 Medium-Term Management Plan (MTP)

For the final year of the 2025 MTP, fiscal 2026, we are targeting ¥40 billion in net sales and ¥4 billion in operating profit. For fiscal 2031, the targets are ¥80 billion in net sales and ¥12 billion in operating profit. To achieve these goals, we will implement the following initiatives.

Manufacturing

As part of our policy to enhance production capacity, improve production efficiency, reduce risks through dual-site operations, and outsource production (for medical devices), we are implementing the following initiatives:

- **October 2023:** Launched a diagnostic reagent for simultaneous measurement of SARS-CoV-2 and co-infecting viruses (Influenza A/B, RSV)
- **April 2024:** Commenced operations in the new cultivation and purification building
- **February 2025 (planned):** Start-up of manufacturing equipment for PCR test reagents and genetic diagnostic reagents

Sales	Implement fair pricing, strengthen sales locations, and share knowledge across the three business sectors
Development	<p>As part of our policy to establish a new research facility, collaborate with the Corporate R&D Department, and develop new products in the biotechnology and medical material fields, we are implementing the following initiatives:</p> <ul style="list-style-type: none"> ● June 2023: Obtained regulatory approval for continuous renal replacement therapy (CRRT) products ● September 2023: Mannosyl erythritol lipid (MEL) selected for NEDO's* Bio Manufacturing Revolution Promotion Project ● April 2024: Completed the Medical Research Laboratory  <p>Opening ceremony for the Medical Research Laboratory</p>
Strengthening business foundations	Diversifying and developing talent, and promoting DX initiatives, etc.

* NEDO: New Energy and Industrial Technology Development Organization

Initiatives to achieve prosperity

People	<ul style="list-style-type: none"> ● Providing diagnostic services through biotechnology that offer faster, more accurate, and accessible health checks ● Offering technologies for the regeneration and replacement of human functions to extend healthy life spans ● Providing rapid and accurate infection testing services to prevent and control the spread of infectious diseases ● Aiming to eradicate infectious diseases, including hepatitis, waterborne infections, and other diseases, by 2030
Planet	<ul style="list-style-type: none"> ● Providing sustainable and petroleum-free materials through bio-manufacturing
Prosperity	<ul style="list-style-type: none"> ● Collaborating with partner companies to focus on specific areas and new functions for the development of new pharmaceuticals ● Developing cell recruitment materials for applications beyond nerves and bones

Business strategy

Environmental and Functional Materials

Chikao Morishige

Co-CEO
Head, Environmental and Functional Materials Division
President & Representative Director,
CEO of TOYOBO MC Corporation



Leveraging core technologies to reduce environmental impact



Business overview and market environment

The environmental and functional materials business is primarily handled by TOYOBO MC Corporation (TMC), a joint venture with Mitsubishi Corporation. This business is divided into two main areas: the resin and chemicals business and the environment and fiber business. Key products driving our core businesses include VYLON®, HARDLEN®, photo functional materials, and environmental solutions.

VYLON® and HARDLEN®

VYLON® is a copolyester resin that enables high-speed transmission for electronic devices. It excels in adhesion and durability, contributing to the proliferation of 5G and 6G technologies. Anticipated to grow in the mobility sector, it plays a central role in the new Mobility Business Strategy Unit established this year.

Photo functional materials

The following optical functional materials have been performing well in China and Asia: Printight®, a photosensitive water-wash nylon resin relief printing plate; Cosmolight®, a photosensitive water-wash flexo printing plate that balances water development with resistance to water-based inks.

Environmental solutions system

VOC recovery equipment: adsorbs and removes volatile organic compounds (VOCs) contained in factory exhaust gases. It reduces the concentration of VOCs released into the atmosphere and allows for the desorption and cooling of the adsorbed VOCs, which can then be recovered and reused as a liquid.



VOC recovery equipment

In terms of the business environment, on the procurement front, rising exchange rates and raw material prices are directly impacting production costs, so price adjustments will be made as necessary. On the sales front, due to the sluggish recovery of Chinese economies, prompt countermeasures are essential. We will also closely monitor and address potential geopolitical risks related to the Russia-Ukraine conflict, the Israel-Palestine situation, and election outcomes in various countries.

Business features and strengths

TMC leverages its core technologies in organic synthesis, polymer modification, copolymerization, adsorption and separation, fiber production, and simulation. Although positioned in the midstream of the industry, we utilize Mitsubishi Corporation's information network to develop products tailored to the needs of end-users. By capitalizing on these strengths, we aim to advance the market adoption of next-generation forward osmosis (FO) membranes for seawater desalination processes.

In addition, we will promote the use of our proprietary brine concentration (BC) membranes (OARO*¹ membranes) in salt production and industrial wastewater treatment processes, which achieve high efficiency and energy savings. This will support capturing demand in regions with stricter industrial wastewater regulations and advancing new applications such as lithium recovery.

In November 2023, in collaboration with Toyobo, we developed an environmentally friendly polyester-based high-heat-resistant adhesive sheet called Vitrimar*² for electronic materials. This innovation significantly reduces greenhouse gas (GHG) emissions by cutting the conventional thermal processing time to one-50th.



BC membrane

*1 OARO: Osmotically Assisted Reverse Osmosis

*2 A high-performance polymer with properties such as re-shapability, self-adhesion, and self-repair. "Vitrimar" is a registered trademark of FONDS ESPCI PARIS.

Business strategies and initiatives in the 2025 Medium-Term Management Plan (MTP)

The targets for fiscal 2026, the final year of MTP 2025, are set at ¥145 billion in net sales and ¥12.5 billion in operating profit. For fiscal 2031, the targets are ¥250 billion in net sales and ¥20 billion

in operating profit. To achieve these goals, we will implement the following initiatives. Strategic labels such as "Growth," "Profit Enhancement," and "Business Reform" have been assigned to all businesses, and a portfolio strategy is being implemented to shift resources toward growth businesses.

In addition, we have transitioned from a divisional structure to a functional headquarters system. In our sales divisions, we are strengthening cross-departmental connections to enhance the efficiency of sales activities through better information sharing. In our development departments, we are fostering cross-sectional collaboration, where members from different teams pool their expertise to generate themes for new product development.

Initiatives to achieve prosperity

People	<ul style="list-style-type: none"> Developed talent development guidelines (career path initiatives) for mid-career and younger employees, mandating at least two cross-category transfers (e.g., across divisions, products) within their first 15 years of employment Began shifting personnel toward growth areas and implementing more targeted performance evaluations
Planet	<ul style="list-style-type: none"> Advancing the development of engineering plastics that contribute to vehicle weight reduction and environmental solution devices that lower VOC emissions into the atmosphere, focusing on enhancing products that contribute to reducing environmental impact, in response to the progress of EV adoption Promoting environmental impact reduction by further enhancing the functionality and efficiency of key products, such as water treatment membrane, which helps address global water shortages, and BREATHAIR®, a comfortable and hygienic cushioning material
Prosperity	<ul style="list-style-type: none"> Aiming to contribute to the renewable energy sector in the future, particularly in applications such as floating offshore wind power using super fibers Focusing on creating comfortable mobility spaces as the first step toward realizing smart communities and improving living environments

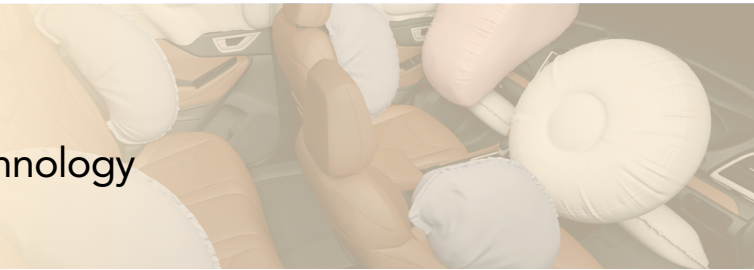
Business strategy

Functional Textiles
and Trading

Eiichi Shimizu

Managing Executive Officer
Head, Functional Textiles and Trading Division

Bringing a touch of comfort to everyday life through textile technology



Business overview and market environment

The functional textiles and trading business comprises airbags, functional textiles, apparel fabrics, and trading company functions (TOYOBO STC CO., LTD.). The airbag segment employs more than 500 people in Thailand, China, and the United States, while the textile segment has more than 3,000 employees across Southeast Asia and Central America. The trading company functions are globally represented with bases in Thailand, China, and India. In fiscal 2024, the textile segment (TOYOBO TEXTILE CO., LTD.) benefited from the post-COVID market revitalization, resulting in strong domestic and international sales growth, leading to increased revenue and profit. The business also achieved profitability for the first time in four years, driven by the withdrawal from unprofitable operations and the streamlining of domestic factories.

The airbag business, however, faced significant challenges. Despite an increase in airbag fabric sales due to the recovery in automobile production, it remained unprofitable, hindered by the delayed improvement in the profit structure following a fire at a yarn factory. In addition, the rapid surge in demand led to increased production costs, resulting in the tough financial performance.

Business features and strengths

The textile business features a product lineup that is both human- and eco-friendly, supported by polymerization and modification technologies developed as a synthetic fiber manufacturer. The growing demand for environmentally friendly materials presents an opportunity to expand sales. However, there are significant concerns, such as rising costs due to the surge in raw material and fuel prices, the accelerated closure

of domestic sewing partner factories, and labor shortages in factories.

In the airbag business, the nylon filament technology developed over many years has been transferred to Toyobo Indorama Advanced Fibers Co., Ltd. (TIAF), a joint venture with Indorama Polyester Industries PCL, which began commercial production of airbag yarn in October 2022.

Business strategies and initiatives in the 2025
Medium-Term Management Plan (MTP)

Under its vision of bringing a touch of comfort to everyday life through textile technology, we are committed to developing and commercializing specialized technologies that enhance everyday living. To achieve an optimal business portfolio and secure appropriate profitability across each business sector, we prioritize initiatives such as withdrawing from unprofitable businesses and products, optimizing production scale and the workforce, and passing on cost increases through price adjustments. The following initiatives are being undertaken by the respective business segments.

Airbags

- Maintaining a strong market share in non-coated fabrics, contributing to environmental protection
- Developing bio-based polyester fabrics to help reduce greenhouse gas (GHG) emissions
- Preparing for increased demand by improving profitability through base price adjustments and reducing manufacturing costs by consolidating product lines, aiming for an early return to profitability
- Accelerating the ramp-up of operations at the new yarn factory in Thailand (TIAF)



TIAF factory

Functional
textiles

- Consolidating domestic factory operations into the Shogawa Plant starting in April 2024
- Expanding production at TOYOBO TEXTILE (MALAYSIA) SDN.BHD. (TTM)

Apparel
textiles

- Consolidating domestic factories and integrating operations with overseas bases led to TOYOBO TEXTILE CO., LTD., achieving profitability and revenue recovery in fiscal 2024
- Enhancing technical capabilities while strategically selecting and focusing on key business areas to ensure stable management of the textile business

Acrylic
fibers

- Japan Exlan Co., Ltd., differentiates its high-value-added products focused on functional materials using proprietary technologies
- Streamlining production processes through OEM production of acrylic staple fibers
- Implementing sales strategies and sales expansion plans, including collaborations with external partners, with the goal of achieving profitability

Trading

TOYOBO STC CO., LTD., focuses on expanding new commercial channels within Toyobo group and increasing the range of products featuring proprietary technologies

Initiatives to achieve prosperity

People

Enhancing employee well-being and ensuring favorable treatment of foreign technical interns, etc.

Planet

Developing waterproof sheets that do not use adhesives, contributing to the prevention of health hazards and the reduction of environmental impact

Prosperity

TOYOBO TEXTILE CO., LTD., focuses on upcycling apparel to create a market for high-quality and attractive recycled products domestically



Upcycled apparel products