



TOYOBO

Beyond Horizons

The graphic features a white rounded rectangle at the top, a blue rounded rectangle at the bottom, and a white rounded rectangle in the middle. The word 'TOYOBO' is written across the white middle section. The letters 'TOYOB' are in black, and the letters 'OBO' are in blue, matching the bottom blue shape.

TOYOBO

Toyobo changes, then changes the world.

"Jun-Ri-Soku-Yu" is an expression which can be translated as,
"Adhering to reason leads to prosperity."

This spirit was held dear by Toyobo founder Eiichi Shibusawa,
who spared no effort toward Japan's modernization.

By helping to solve various social issues,
we not only enrich the world but improve both our company
and ourselves as individuals.

We will continue to create the solutions needed by people
and the earth with our materials and science.

"Prosperity" refers to a positive state that encompasses physical, emotional, and social well-being.



Creating a prosperous future.

At Toyobo, we see a changing outlook for the future.

A more prosperous society. A more beautiful planet.

People who are happier and more fulfilled.

With the technologies we have developed over many years, we provide the world with comfort, reassurance, and joy.

From a textile manufacturer to a company shaping the future.

Through a combination of materials and science,

Toyobo will do more to catalyze chemical reactions

that create a new and exciting world.



Continuously tackling social issues.

We are working on solutions to global issues.

Examples include supplying desalination technology to address water scarcity, and products that help reduce food loss and waste and limit CO₂ emissions.

We also provide detection kits for SARS-CoV-2 and other infectious diseases that deliver fast results.

Through our hard work, there are issues that we at Toyobo are able to solve.

Today and always, we will continue helping realize a sustainable society.





Always innovating.

Toyobo started as a cotton spinning mill.

With a pioneering spirit that aims to realize a better society and richer lives, we have since grown into a company that produces, processes, and sells performance materials.

These include products in four areas:

Films, Life Science, Environmental and Functional Materials, and Functional Textiles and Trading.

We are never satisfied with the present.

For the realization of sustainable growth,

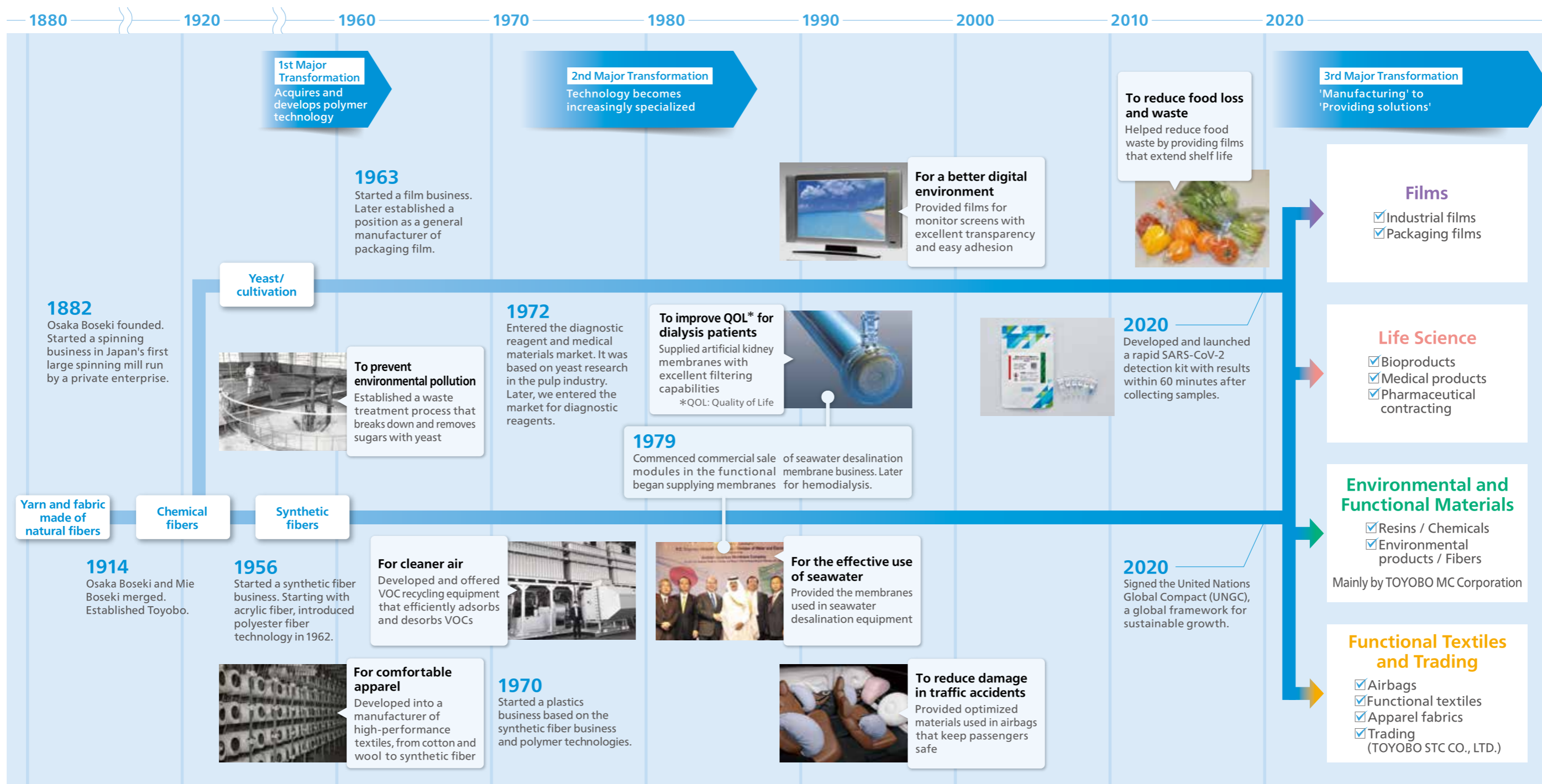
we welcome change, enjoy change, and create change.

Aspiring to be a category leader, we create change in our time that is good for people and the planet through Toyobo's method of manufacturing original products that are safe and reassuring.

HISTORY

The evolution of Toyobo and its technology. A history of addressing the needs of the times for 140 years.

Toyobo keeps a close watch on the changes happening today. That's how we've used our advanced technology to fulfill the expectations of both the market and the public. We've contributed to society's development by making numerous high-performance products such as films, automotive materials, environmental materials, and biotech and pharmaceutical products.



Market Needs & Social Issues

Japan's industrial development	Postwar rebuilding, rapid economic growth	Steady growth period	Progressing informatization and internationalization	Growing environmental awareness, advances in digital technology
<ul style="list-style-type: none"> Stimulate light industry such as cotton and yarn spinning 	<ul style="list-style-type: none"> Build up daily necessities 	<ul style="list-style-type: none"> Growing public hazards from air pollution Pursuit of clothing comfort Increasing traffic accidents from motorization 	<ul style="list-style-type: none"> Increasing lifestyle diseases Water scarcity observed in locations around the world 	<ul style="list-style-type: none"> Spread of LCD TVs COVID-19 pandemic Spotlight on food loss Spread of smartphones

TOP MESSAGE

We will continue to create the solutions needed by people and the earth with our materials and science.



Ikuo Takeuchi
Ikuo Takeuchi
President & Representative Director

Toyobo began its operations with cotton spinning, then entered into synthetic fibers and diversified to other fields. Today, we have developed into a company that manufactures, processes, and sells so-called high-performance materials, including a variety of products in the areas of Films, Life Science, Environmental and Functional Materials, and Functional Textiles and Trading.

Under our corporate philosophy framework, "TOYOBO PVV5," we aim to be a group that continues to create the solutions needed by people and the earth with our materials and science. That vision is based on a cherished motto of our founder, Eiichi Shibusawa, "*Jun-Ri-Soku-Yu*" which means, "Adhering to reason leads to prosperity."

That means changing our focus from the manufacture of high-quality products to being a company that provides solutions to customers. To that end, we are united companywide in implementing sustainable management as we take action to protect the environment and contribute to solutions to social issues.

We are always looking to the future. We shall maintain our close watch on the changing times and society as we welcome change, enjoy change, and create change.

TOYOBO PVV5

The TOYOBO PVV5 provide a framework for updating our corporate philosophy for the current times.

● Principle

● Vision



Principle

"Jun-Ri-Soku-Yu" Adhering to reason leads to prosperity

"Jun-Ri" · Do what should be done **positive standpoint**
· Don't do what should not be done **defensive standpoint**

"Soku-Yu" Adhering to "*Jun-Ri*" leads to a prosperous society while also realizing self-growth

This is the founding spirit of our Company and is our belief.

Vision

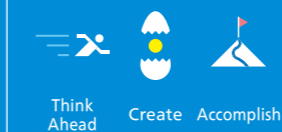
We will continue to create the solutions needed by people and the earth with our materials and science

Values

We welcome change, enjoy change, and create change.

"Toyobo Spirit ~ 9 Commitments"

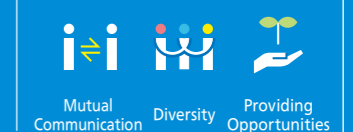
Challenge



Reliability



Collaboration

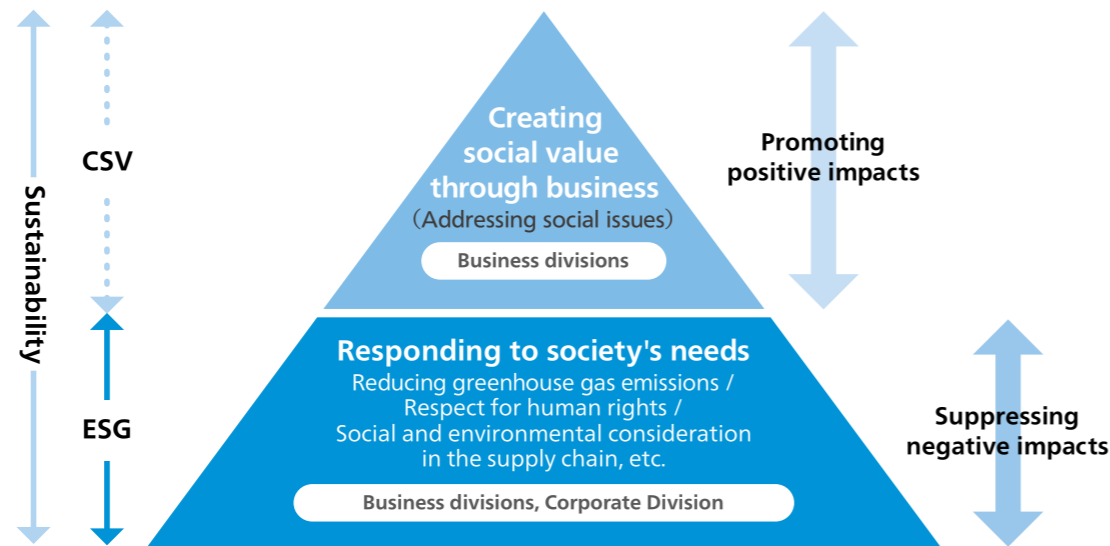


SUSTAINABILITY

Toyobo has been contributing, and will continue to contribute, to solving social issues.

Since Toyobo's founding in 1882, we have followed the concept of "Jun-Ri-Soku-Yu" to expand our business and have grown by meeting society's needs and helping create solutions for social issues. Since fiscal 2020, we have been orienting the company toward "sustainability management." We are incorporating elements of ESG into our management and strategy and publicizing this action among our stakeholders. And since fiscal 2022, we have initiated action companywide to become decarbonized and create a circular economy. To create both economic and social value, the entire Toyobo Group is united in producing the solutions needed by people and the planet.

Approach to Sustainability Management



Read about sustainability at the Toyobo website ▶



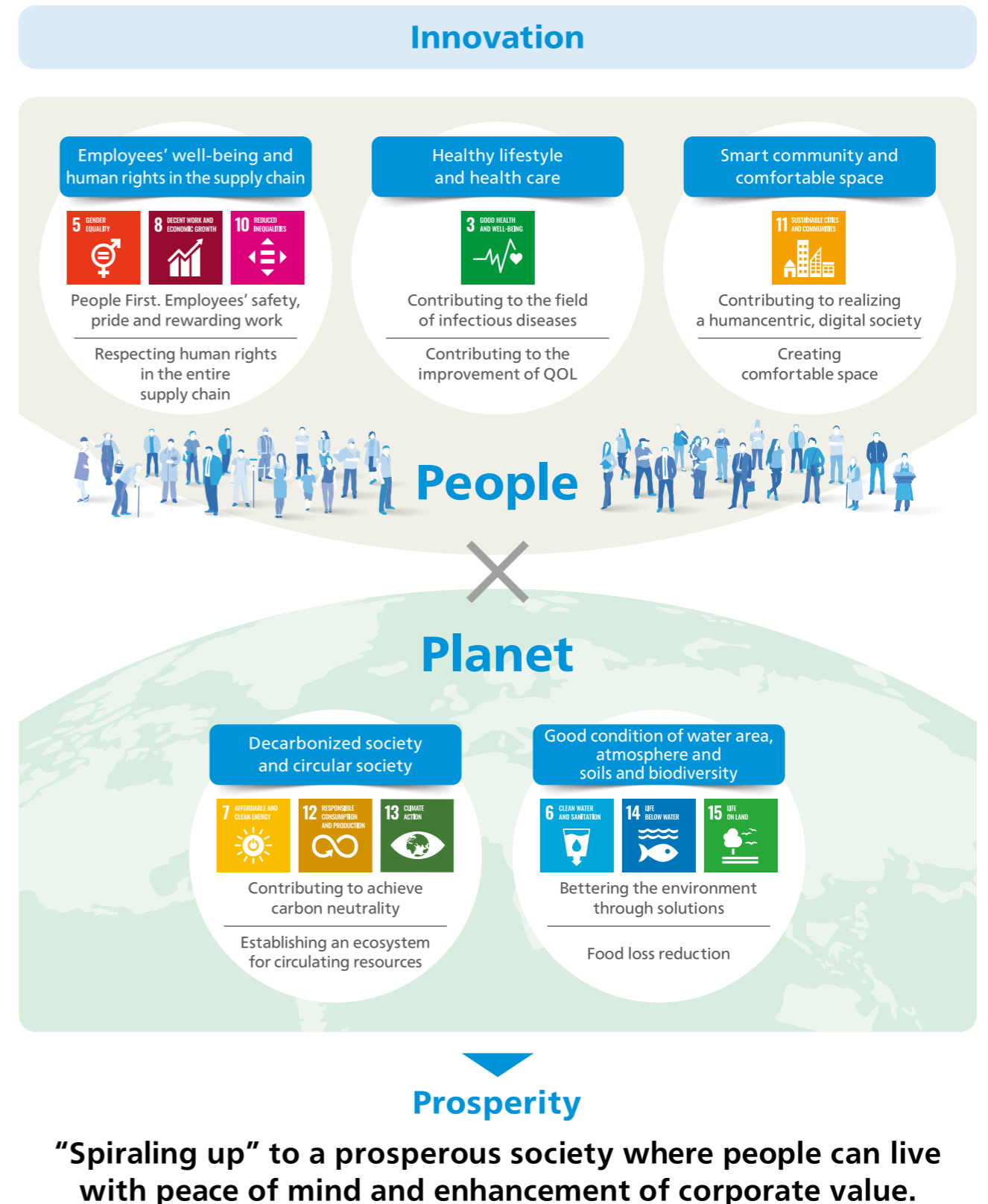
Milestones in sustainability management

<p>1882: Osaka Boseki founded 1886: Mie Boseki founded (Toyobo founded in 1914)</p> <p>By spreading the availability of fibers for clothing as Japan's first privately-operated large spinning mill, the company served as a good member of society addressing various issues.</p>	<p>A pioneer in creating shared value (CSV) based on the ideal of "Jun-Ri-Soku-Yu," which was valued by Eiichi Shibusawa</p> <p>Since the 1960s, the company has been involved in research and development of technologies to prevent environmental pollution and contamination.</p>	<p>Shift toward sustainability management and full-fledged activities since 2020</p> <p>January 2020: Joined United Nations Global Compact. April 2020: Established the Corporate Sustainability Department. Established the Sustainability Committee.</p>	<p>Implementing reforms to tackle new challenges and contributing to the realization of a sustainable society</p> <p>We will further accelerate managerial efforts to improve both economic and social value.</p>
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Toyobo's Sustainable Vision 2030

Toyobo's Vision for a Sustainable Society

We will continue to create the solutions needed by people and the earth with our materials and science.



SOLUTIONS

Toyobo materials and technologies address issues facing people and the earth.

Toyobo creates a range of products and services to support comfortable living and the future of our planet's environment.

Films, adhesives, and coating are technologies that provide new value, reducing food loss and helping the environment.

Industrial film and packaging film are central to this field. For packaging film, we promote global sales of transparent vapor-deposited film for food preservation amid ongoing social issues such as food loss and waste.

< SDGs related to the business >



Films

Environmental and Functional Materials

Mainly by TOYOBO MC Corporation

With high-performance materials, we address global issues such as climate change and water shortages.

TOYOBO MC Corporation, which handles Environmental and Functional Materials products, is a joint venture that Toyobo and Mitsubishi Corporation began operations for in April 2023. The company is rolling out an aggressive growth strategy in environmental solutions and in mobility and electronics materials.

< SDGs related to the business >



The unique products we produce contribute to medical development and improve Quality of Life.

Biotech and membrane technology are the two core technologies. By combining diverse technologies, we address issues for users and society in medicine and life science.

< SDGs related to the business >



Life Science

Functional Textiles and Trading

We leverage the technologies we have developed as a fiber manufacturer to create changes that make life a little more comfortable.

This product group includes airbags, functional textiles, apparel fabrics, and trading. We leverage the technologies we have developed as a high-performance fiber manufacturer to develop products that are good for people and the planet.

< SDGs related to the business >



CONTENTS	INTRODUCTION.....	01	Films.....	17	Life Science.....	23	Environmental and Functional Materials.....	29	Functional Textiles and Trading.....	41	Research & Development.....	47
	HISTORY.....	09	· Films		· Separation membranes and modules		· Resins / Chemicals		· Airbag fabrics and raw yarn		Safety, Disaster Prevention, Quality.....	49
	TOP MESSAGE.....	11			· Medical devices		· Environmental products / Fibers		· Comfort evaluation technology		Production bases in Japan.....	51
	SUSTAINABILITY.....	13			· Pharmaceuticals				· Textiles		Global network.....	53
	SOLUTIONS.....	15			· Bioproducts				· Industrial fibers and civil materials			
					· Cosmetic ingredients				· Adhesives and coatings			



Films

Environmentally-friendly products, from food packaging film to smartphone and TV films, make everyday life better.

Offering excellent transparency, anti-fog, and glossiness,
the oriented film we developed in the 1960s revolutionized food packaging.

Since then, Toyobo has been a pioneer as an oriented film supplier,
expanding this business while overcoming quality and processing challenges.

In addition to improving the functionality of the films, we have developed advanced adhesion
and coating technologies. With these, we provide food packaging film that helps reduce
food loss and LCD products that enable clear image expression.

In the future, we will also turn our attention to developing products using biomass raw materials,
aiming to become a global leader among eco-friendly product manufactures.

Please visit the Toyobo website
for product information ▶



SDGs related to the business



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Films

Industrial films: optics

A super retarder film that eliminates the rainbow effect

COSMOSHINE SRF™ (Super Retarder Film)

This super retarder film possesses a phase difference that far exceeds the interference region. A combination of LED light sources eliminates double-refraction-induced tinting (i.e., the rainbow effect) and converts light emitted by crystals into a state that is closer to natural light. We apply these traits to spread the use of products, such as protective film for polarizing plates, that go beyond the capabilities of conventional PET films.



Industrial films: industrial part materials

Polyester-based releasing film with excellent delamination

COSMOPEEL™ PUREX™

This releasing film is used in the manufacture of ceramic capacitors. It delaminates smoothly and to the proper extent.



The Toyobo Group is furthering initiatives for the recycling of plastic resources.



Industrial films: industrial part materials

Highly durable and heat-resistant film with good mechanical strength

TEONEX™

TEONEX™ PEN film provides superior properties such as high modulus, reliable electrical insulation, and good resistance to heat and hydrolysis. This high-performance biaxially oriented film has a good flexibility, which contributes to its easy conversion, just as PET film. We are expecting and targeting newly emerged market needs with this film. (PEN: Polyethylene naphthalate)



Industrial films: industrial part materials

Fuel cell parts for Toyota's Mirai fuel cell vehicle

Sealant for fuel cells

Toyota uses our sealing material with TEONEX™ PEN film, which is coated with our proprietary adhesive agent, for their "MIRAI" hydrogen fuel cell vehicle. The sealing material has strong endurance that stands up to extreme environments, approved by Toyota for ensuring that fuel cells have long-lasting reliability. We continue strengthening our efforts toward the development of hydrogen fuel cell vehicles and our contribution to a sustainable society.



Industrial films: environment

Industrial, environmentally-friendly film suited for printing

Crisper™, KAMISHINE™, RESHINE™

We produce eco-friendly films from recycled PET bottles. Crisper™ and KAMISHINE™ are white PET-based synthetic paper that contain cavities. They are characterized by their cushioning properties and their lightness, and excellent printability due to their surface coating. RESHINE™, a transparent PET film made from up to 100% recycled materials, has excellent transparency and printability.



We are developing horizontal recycling technology for KAMISHINE NEO™, a polyester-based synthetic paper used for applications such as the releasing film on labels.

Packaging films

Environmentally-friendly shrinkable film
SPACECLEAN™

This heat-shrinkable polyester film is used as a material in container labels. SPACECLEAN™ film is thinner and lighter to reduce waste and also contains Post-Consumer Recycled (PCR) resin from PET beverage bottles to create a sustainable society. It is suitable for applying film even for automation. This varied lineup is helping reduce impact on the environment.



Packaging films

An OPP film with no clouding from water droplets
F&G™ Film

This polypropylene film with a fog-proof effect keeps water droplets from fogging the film. When used for packaging, this powerful property makes fresh fruits and vegetables appear more pleasant and vivid. Water droplets do not easily form inside the package, which helps to prevent fruits and vegetables from rotting and to keep them fresh.



Packaging films

Optimized for environmentally-friendly packages
BIOPRANA™

This film helps reduce the use of petrochemical resources because it is partially sourced from plant-based materials. The environmentally-friendly product series is available in polyester, nylon, and polypropylene film.



High heat-resistant polyimide film

High heat-resistant polyimide film
XENOMAX™

XENOMAX™ is a special PI film. It has the advantages of thin, lightweight, crack-proof, bendable macromolecule film, plus the high thermal resistance and low CTE of inorganic materials like glass. Sophisticated applications for XENOMAX™ as a TFT substrate include e-paper, mini LED displays, and x-ray sensors.



Packaging films

Transparent, colorless environmentally-friendly film
ECOSYAR™

This gas barrier film has a lower environmental impact. We created it by applying ceramics to polyester and nylon with our proprietary vapor deposition technology. The excellent barrier properties and flexibility make this film an alternative to other barrier materials such as aluminum foil, preventing moisture and gases from permeating to keep food fresh.



Packaging films

Made with 80% PCR resin from PET beverage bottles

CYCLE CLEAN™

We reduce carbon emissions by approximately 22% by increasing the amount of post-consumer recycled (PCR) resin from PET beverage bottles to 80%, at the highest percentage in the world. When used for beverage labels, the film is only 12 μm thick, which also helps reduce plastic waste.



Green catalysts

A unique aluminum catalyst for polyester polymerization

TOYOBO GS Catalyst™

TOYOBO GS Catalyst™ is an aluminum-based, heavy metal-free catalyst for polyester polymerization. It creates polyester resins that are optimized for recycling and reduces environmental impact. Compared with polyester produced with typical catalysts, polyester catalyzed by TOYOBO GS Catalyst™ shows minor degradation during recycling. Mixing the resins with other polyesters improves its thermal stability and recyclability.



Polyester resins polymerized with different catalysts: TOYOBO GS Catalyst™ (front), antimony catalyst (right), titanium catalyst (back)



Life Science

Our diverse products, like the fully automated gene analysis system that creates labor and time efficiencies, are driving advances in medicine.

Discovering illnesses at an early stage is critical to improving Quality of Life (QOL).

Toyobo applies our knowledge of research reagents gained over the years to develop genetic test reagents and their ingredients to test for infectious diseases.

We also provide a fully automated gene analysis system that shortens treatment durations and reduces the cost of personnel and drugs.

Furthermore, we have developed highly reliable and safe ingredient enzymes for use in devices that measure blood glucose in diabetics.

We will continue working on medical advances and better QOL.

Please visit the Toyobo website for product information ▶



SDGs related to the business



*Photo is for illustrative purposes only.

Separation membranes and modules

Achieving excellent filtration

Hollow Fiber Membranes for Artificial Kidneys

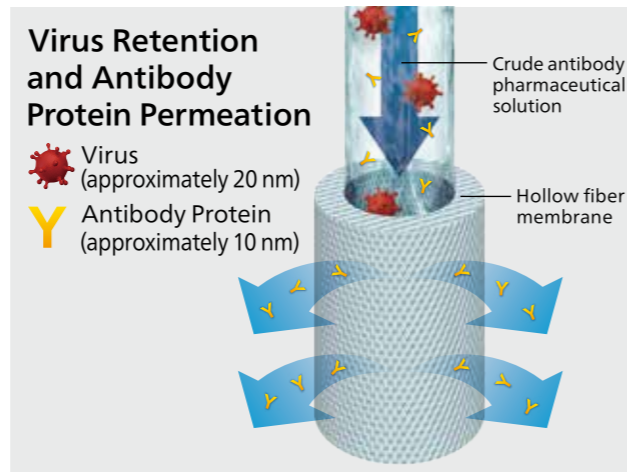
We have enabled superior filtration by creating microscopic pores on hollow fibers from cellulose triacetate material, using microphase separation and pore size control technology. The thinness of the membranes allows for both more effective removal of waste products and more compact dialyzers.



Reliable virus retention and fast processing

Virus Retention Hollow Fiber Membrane

Our virus retention membrane realizes quick and effective removal of viruses in the production process of antibody pharmaceuticals. We are expanding the possibilities of hollow fiber membrane technologies.



Medical devices

Automated gene analysis system

GENECUBE™

GENECUBE™ is a fully automated gene analysis system based on PCR. This system enables rapid detection in as little as 25 minutes using our unique gene amplification and detection technologies. This system can contribute to the rapid diagnosis of infectious disease. A new compact model was launched in 2021.



Automated urine sediment analyzer

USCANNER premio™

USCANNER premio™ is an imaging-based urine sediment analyzing system that analyzes stained urine specimens. Because the system can merge multiple images into one image, the images of this system are close to that of microscopic images of concentrated urine specimens. The system can reduce the work involved in urine sediment tests.



Ingredient enzymes for blood glucose sensors

FAD-GDH

We sell enzymes for sensors that diabetics can use to measure their blood glucose at home. In recent years, we have developed an enzyme called FAD-GDH, which produces faster and more accurate blood glucose measurements than conventional methods. We now have the top market share both in Japan and overseas. Our blood glucose sensors using FAD-GDH are now used worldwide.



Nerve regeneration guidance conduit

Nerbridge™

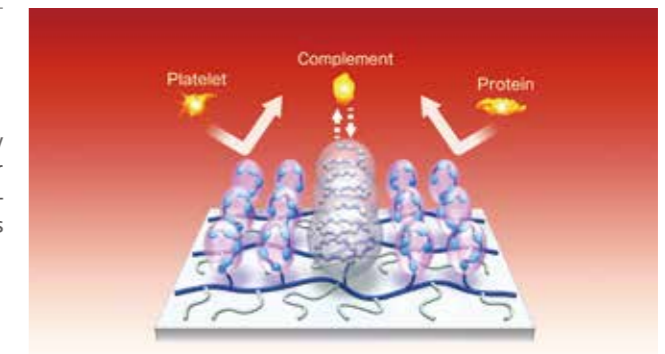
This medical device promotes the regeneration of ruptured or damaged nerves. The end of the damaged nerve is pulled and sutured into the lumen of the conduit filled with collagen. Nerbridge™ is absorbed and degraded in the body in several months and contributes to the early recovery of ruptured nerves.



Antithrombogenic polymer

SEC ONE SURFACE™

This biocompatible polymer can introduce antithrombogenicity on resins, metals and other base materials. Since its polymer side chain has three units - hydrophilic, hydrophobic, and water-repellent - it suppresses reactions that occur when blood comes into contact with foreign matter.



Pharmaceuticals

Contract pharmaceutical manufacturing plant compliant with the U.S., EU, and Japanese GMP requirements

Formulation technology for injection (vials and syringes)

Specializing in the production of injectable drugs using the aseptic filling method, we provide a wide range of support from formulation studies to the manufacture of investigational drugs and products. We are highly trusted by pharmaceutical companies, universities, and venture companies in Japan and overseas. In particular, we have extensive experience in handling biopharmaceuticals such as protein and peptide preparations (formulation review, formulation and formulation manufacturing).



Supporting drug development from early development to submission

Quality Testing

We support various stages of drug development, including not only stability testing and product quality testing for application, but also method development, analytical method validation, preparation of accompanying materials for application, and attendance at conformity surveys, using our various testing technologies and abundant experience.



Flexible adaptability to diverse packaging needs

Packaging

We can handle a variety of packaging for small-quantity, multi-variety investigational drugs and products. We can also handle intermediate and final packaging of products introduced overseas. We also accept requests for visual inspection.



Bioproducts

COVID-19 test kit

SARS-CoV-2 Detection Kit -Multi-

This real-time, one-step RT-PCR kit detects SARS-CoV-2 with a multiplex PCR that amplifies the internal control and two regions originating in the N gene of SARS-CoV-2 RNA. It can perform a PCR test by simply mixing a saliva or nasopharyngeal swab sample with a pretreatment liquid, then applying heat treatment, all without having to purify nucleic acid.



High speed, accuracy, and success rate

KOD One™ PCR Master Mix

This product uses a modified KOD DNA polymerase with high amplification efficiency. It performs a singularly high Hot Start PCR. The PCR can occur at 5 sec/kb for 1 to 10 kb and at 10 sec/kb for 10 kb or more. Also usable with a PCR that uses a primer or template including inosine or uracil.



Cosmetic ingredients

Moisturizing agent from naturally fermented olive oil

CERAMELA™

This is a biosurfactant obtained by fermenting olive oil. It agrees well with the skin and quickly penetrates the horny cell layer. It also supplements barrier function to retain moisture.



Natural ingredients from soy germ

PHYTOPOLYAMINE™

The soybean germ extract includes a large amount of bioactive substances called polyamines. Polyamines are associated with important cell activity, such as cell multiplication, gene expression, protein synthesis, and autophagy. These actions provide an excellent aging care effect.





Environmental and Functional Materials

Mainly by TOYOBO MC Corporation

High-performance materials keep the environment clean. They also help address global issues such as water shortages.

TOYOBO MC Corporation, which handles Environmental and Functional Materials products, is a joint venture that Toyobo and Mitsubishi Corporation began operations for in April 2023. From development of more lightweight, high-performance mobility materials, to the provision of desalination technology that helps reduce water shortages around the world and VOC recovery devices that adsorb and recover VOC emitted by factories, we are contributing to the creation of a clean global environment. And to realize a carbon-neutral society, we are working on the development of high-performance fibers to facilitate floating offshore wind power. By working together across our group and rolling out functional materials with high added value worldwide, Toyobo will contribute to solutions for global issues.

Please visit the Toyobo website for product information ▶



SDGs related to the business

3 GOOD HEALTH AND WELL-BEING	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	17 PARTNERSHIPS FOR THE GOALS

*Photo is for illustrative purposes only.

Resins / Chemicals

Engineering plastics

Thermoplastic polyester elastomer

PELPRENE™

PELPRENE™ is a thermoplastic polyester elastomer, which has the properties of both rubber and engineering plastic. It has been used for a wide range of applications including CVJ boots, which cover the driving axle joint and must withstand extreme conditions and environments. PELPRENE™ can be processed via injection, extrusion, or blow molding to make a variety of products including ultra-compact precision parts and wide sheets.



Engineering plastics

Performance polyamide resin

GLAMIDE™

GLAMIDE™ is a polyamide resin which consists of base resins such as PA6 and PA66 that are strongly reinforced with mineral filler or glass fibers to meet the customer's needs. It is used for a wide range of applications including automobile parts, IT devices such as PCs and smartphones, and household appliances such as rice cookers.



Engineering plastics

Moldable thermoplastic polyester resin

VYLOPET™

VYLOPET™ is a polyester resin for injection molding developed by Toyobo. As a polyester resin, it has excellent heat resistance, rigidity, chemical resistance, and electrical properties. It is therefore used in applications such as automobile parts, electric and electronic parts, and mechanical parts. VYLOPET™ makes the parts more lightweight, enables colors and more complex designs, and result in favorable value analysis.



Engineering plastics

Biomass-based performance polyamide

VYLOAMIDE™

VYLOAMIDE™ is a biomass polyamide resin made from castor oil beans, an inedible plant material. It has a melting point of 315°C, higher than any previous high-melting-point polyamide resins, and has low water absorption and excellent dimensional stability. These characteristics allow it to be used in IT-related fields, which use many surface mount technology parts, and the automotive field, where there is demand for greater heat resistance.



Engineering plastics

General predictions covering everything from design to manufacture

CAE (Computer Aided Engineering system)

This technology simulates deformation and formation of various materials, from flexible elastomers to rigid engineering plastics. We use the results of our latest numerical analyses of surface appearance, warping, deformation, and optimal shape prediction to design the ideal products and metal molds for the customer.



VYLON™ · HARDLEN™

Suitable for paints, coatings and adhesives and more

VYLON™, VYLONAL™

VYLON™ is a copolymerized polyester. It gives excellent adhesion to various substrates such as plastics and metals, and also can bond dissimilar substrates. VYLONAL™ is an environmentally-friendly, water-based copolymerized polyester.



VYLON™ · HARDLEN™

A soluble thermal-resistant polymer

VYLOMAX™

This thermal-resistant polymer contains imide and amide bonds in each molecule. It is both chemical-resistant and soluble. These properties are used for thermal-resistant film coatings, thermal-resistant insulation coating, chemical-resistant paint, and more.



VYLON™ · HARDLEN™

Polyester resin for low-pressure molding

VYLOSHOT™

It shows good thermal shock resistance in a wide temperature range and possesses excellent moldability, chemical resistance and heat and humidity resistance. Used in fields such as electrical appliances and automobiles.



VYLON™ · HARDLEN™

Polyolefin adhesive imparting agent

HARDLEN™

This resin, with chlorinated or acid-modified polyolefin, exhibits ground-breaking adhesion to polypropylene (PP). It is used as an adhesiveness-imparting agent for OPP film and PP bumper primer.



Photo-functional materials

Pioneer of water-wash letterpress printing plates

Printight™

Printight™ can be processed with tap water at room temperature (no additives required). Both excellent image reproducibility in highlight and rich ink transfer can be achieved due to exceptional photopolymer processing technology.



Photo-functional materials

World's first water-wash flexo printing plates

Cosmolight™

Cosmolight™ can also be processed with water, making it durable for water-based ink, as well as solvent-based and UV-ink. This revolutionary plate eliminates the need to use toxic, environmentally damaging washout solvents. The required processed time can be shortened compared to standard plates. The plate also achieves a brilliant printing quality with its unique dot shape.



Fine chemicals

Contract synthesis business with proprietary technology

Fine chemicals custom manufacturing

Toyobo handles custom manufacturing with fundamental technology developed over many years. We can produce chemical compounds from raw materials requiring special attention, such as carbon disulfide, hydrogen sulfide, sodium azide, sodium cyanide, chlorine, hydrogen gas, and ammonia gas. We have an established reputation for responding flexibly and promptly to sophisticated customer requests.

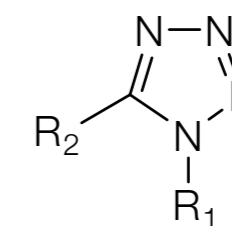


Fine chemicals

Flexibility to synthesize chemical compounds with modified properties

Tetrazoles

Tetrazoles are unique chemical compounds with four nitrogen molecules in their structure. Tetrazoles generate nitrogen gas by thermal decomposition. Applications include air-bag gas generators and gas forming agents. Tetrazoles are also used for etchant additives and rust inhibitors due to interaction between metal surfaces and tetrazole.



Environmental products / Fibers

Environmental solutions

Condenses VOC gas into small airflows and high-density concentrations

HONEYROTOR™ VOC Concentration Equipment

This equipment condenses VOC gas from large to small airflows and from low-to high-density concentrations. A system created through a combination with VOC treatment equipment uses recovery or combustion in a later stage. This significantly lowers the initial running costs throughout a treatment system. The equipment has a large track record of deliveries in the liquid crystal and semiconductor sectors. It is also used in paints and printing. This equipment helps conserve energy and protect the environment.



Environmental solutions

Efficient adsorption and recovery of VOCs in emissions

K-FILTER™ VOC Recovery Equipment

This VOC gas recovery equipment uses high-performance active carbon fiber. It can efficiently adsorb and recover VOCs in emissions. The recovered VOCs are also reusable. The equipment helps make manufacturing processes greener and less costly in a wide range of fields, including membrane production, converters, cleaning, chemicals, and foods.



Environmental solutions

Removes trace substances and VOCs in effluent

K-FILTER™ Wastewater treatment Equipment

This equipment uses high-performance active carbon fiber to remove trace components from effluent. It efficiently removes VOCs and trace substances such as carcinogens from effluent, which is difficult with conventional activated carbon.



Environmental solutions

Reverse osmosis membranes with hollow fibers to change seawater into drinking water

HOLLOSEP™ RO (Reverse Osmosis)

This is the central element to desalination equipment that applies the principle of reverse osmosis with hollow fiber membranes. It has excellent chlorine resistance and prevents microbial contamination. Since Toyobo commenced the world's first commercial production of single-stage desalination elements in 1979, HOLLOSEP™ has been highly acclaimed outside Japan for producing high-quality water for domestic use in the Middle East/Arabian Gulf region from high-temperature seawater that contains high concentrations of salt, which are harsh conditions for reverse osmosis membranes. The membranes have also been installed in some of Japan's largest desalination facilities.



Environmental solutions

Membranes that further concentrate seawater brine or industrial wastewater

HOLLOSEP™ BC (Brine Concentration)

These membranes compatible with new membrane concentration methods can make industrial wastewater and seawater brine from desalination plants even more highly concentrated. This method consumes much less electricity than conventional thermal concentration. It helps to reduce the volume of wastewater and enhance the efficiency of reuse, reduce the environmental impact of ZLD systems that do not produce liquid waste, and recover valuable substances from effluent.



Environmental solutions

Enables membrane desalination with low operating pressure

HOLLOSEP™ FO (Forward Osmosis)

These membranes are applicable to processes that use forward osmosis (FO), which causes the natural movement of water due to a difference in osmotic pressure. These membranes enable controlled membrane separation under lower operating pressure than conventional reverse osmosis (RO) membranes. FO membrane demonstration tests are proceeding in various countries in an ongoing effort toward commercialization.



High-performance fibers

Ultra-high-strength polyethylene fiber

IZANAS™

IZANAS™ is more than 10 times stronger than steel at the same weight, yet light enough to float on water. It also has excellent cut and abrasion resistance, as well as chemical and UV resistance. These excellent properties allow IZANAS™ to be used in a variety of applications, including ropes, nets, fishing lines, cut-resistant gloves, FRP, and FRC.

*The trademark was changed from Dyneema™ to IZANAS™ in 2016.



High-performance fibers

Polyethylene fiber with excellent cut resistance

Tsunooqa™

This high-strength polyethylene fiber employs proprietary technology developed by Toyobo for high-performance fibers. Though it is soft and flexible, it has excellent cut and chemical resistance. Tsunooqa™ has many uses, including cooling bedding products and safety equipment like cut-resistant gloves. Also available as dope-dyed yarn.



High-performance fibers

A fiber made of rigid rod chain poly (p-phenylene-2, 6-benzobisoxazole (PBO)) molecules

ZYLON™

ZYLON™ has the highest strength, modulus, thermal and flame resistance among the world's organic fibers. It is widely used in industry as a thermal-resistant material, such as protective cloth for firefighters. The fiber also has sports applications such as reinforcement materials for Formula 1, spokes and beads for racing bike tires.



Nonwoven fabric materials

A multifunctional, three-dimensional reticular structure

BREATHAIR™

Rubber elastic polyether-ester elastomer fibers form a structure that is connected in three dimensions while drawing numerous loops. It is an eco-friendly product that is recyclable and has excellent breathability and durability. It is widely recognized as new cushion material that can be substituted for polyurethane foam for bedding and train seats.



Nonwoven fabric materials

Nonwoven fabric using recycled polyester

ECOVOLANS™
ECOECULE™

ECOVOLANS™ and ECOECULE™ are 100% PET spunbond (long filament nonwoven fabric) made of at least 70% PET bottle recycled resin. ECOVOLANS™ and ECOECULE™ are ecologically-friendly products, as are our regular PET spunbond products ECULE™ and VOLANS™. Both ECOVOLANS™ and ECOECULE™ can be used for a wide range of applications such as construction, geotextiles, automobile parts, etc. where our ECULE™ and VOLANS™ can be applied. A 100% recycled PET resin type will be launched in the foreseeable future.



Nonwoven fabric materials

Spunbond (long filament nonwoven fabric) with excellent light blocking and water permeability

Weed control sheet

This is a weed control sheet made of 100% polyester spunbond with excellent light blocking and water permeability and can be applied to various construction conditions. We have various kinds of spunbond products for weed control applications including ECOECULE™ made of at least 70% PET bottle recycled resin. A 100% recycled PET resin type will be available in the foreseeable future.



Nonwoven fabric materials

Lightweight leather-like non-woven fabric achieving weight reduction for automobiles

CATENA™
MODENA™

Aiming to find an alternative to conventional PVC leather, Toyobo has developed CATENA™, a leather-like polyester spunbond fabric for automobile tonneau cover application. CATENA™, which is made of PET spunbond with acrylic resin that is impregnated and coated, offers air permeability and excellent heat and light resistance. Compared to PVC leather, CATENA™ is fairly light and contributes to the weight reduction of automobiles. MODENA™ is the product that has further reduced the weight and cost competitiveness of CATENA™. Beyond Japan, major global automobile manufacturers have been adopting MODENA™ worldwide to make their vehicles much more lightweight and compact.

Nonwoven fabric materials

A dust removal filter media for high collection efficiency

ELITOLON™

ELITOLON™ is an electrostatically charged filter media that enables high collection efficiency while keeping the pressure drop low. A large variety of products handle a wide range of particles.



Nonwoven fabric materials

A deodorization filter media applying adsorption technology and catalysts

ADSTOLON™

ADSTOLON™ is a deodorization filter media that is derived from the activated carbon fiber that Toyobo succeeded in mass-producing for the first time in the world. A large variety of products handle a wide range of odors. The filter is available as a pleated type to realize a long product life and a honeycomb type for extremely low pressure drop.



Nonwoven fabric materials

A combination filter media for dust removal and deodorization

TWINTOLON™

TWINTOLON™ is a dust removal and deodorization filter that consists of a combination of ELITOLON™ and ADSTOLON™. The filter media has a wide performance range in dust removal and offers many options for additional functions.



Nonwoven fabric materials

Used in high-temperature bag filters

PROCON™
Polyimide fiber

Polyphenylene sulfide (PPS) fiber PROCON™ and polyimide fiber are used in fabric for high-temperature bag filters for their excellent thermal resistance, chemical resistance, and dust collection. In addition to supplying materials, TOYOBO MC Corporation provides technical support and services, including selection of materials according to emission requirements, analysis of used bag filters, and investigation into the causes of ruptures.





Functional Textiles and Trading

With fabric technology for smart apparel and airbag fabrics, we make life a little more comfortable.

Our company puts out a variety of products that leverage the polymerization and denaturation technologies we have developed as a manufacturer of high-performance fabrics.

One of those product categories is smart apparel that monitors the wearer's vitals.

The wide range of applications span sports science support for athletes, monitoring in workplaces and nursing care settings, and detection of driver drowsiness.

We also develop noncoat airbag fabrics for recyclability, high-performance fibers for apparel, as well as high-end thobe fabrics for ethnic costumes in the Middle East/Persian Gulf region.

To solve problems and issues for users, we endeavor to make products that are good for people and the planet.

*There are two kinds of airbag fabrics. One is coated with resin to restrict airflow and make the airbag deploy more quickly. The other is noncoated.

Please visit the Toyobo website for product information



SDGs related to the business



*Photo is for illustrative purposes only.

Airbag fabrics and raw yarn

Fabrics protect passengers from impacts in collisions

Airbag Fabrics

The automobile airbag market is expanding not only to Japan, North America, and Europe but to BRICS countries and beyond. Our wide-ranging lineup of airbag fabrics made from nylon 66 and polyester yarn includes non-coated types, as well as coated fabrics. Toyobo airbag fabrics have a strong reputation among auto parts manufacturers because they are lightweight, compact, and of reliable quality.



Comfort evaluation technology

Technology to help the development of materials that support our daily lives

TOM™ III SAM

We have been developing comfort evaluation technology to quantify human senses that supports the development of functional materials. For example, we developed the sweating thermal mannequins TOM™ III and SAM, which can evaluate comfort when wearing a garment such as sensations of heat and humidity when sweating, measured by the temperature and humidity within clothing. They have been used in the development of various materials.



The TOM™ III has more than 200,000 sweating holes on its surface, and can measure temperature and humidity within clothing.



SAM

Textiles

High-performance apparel fibers for a sustainable society

Our high-performance apparel fibers have a wide range of applications, from outdoor use and sports to uniforms and school settings.



Comfort-centric materials for wearable devices

COCOMI™

COCOMI™ is a stretchable conductive film for wearable devices. It enables Smart Sensing Wear™ that measures biological information. COCOMI™ is a thin elastic sheet that also possesses excellent conductivity. It is so comfortable to wear and can collect highly accurate information about the body. COCOMI™ is used for husbandry, medical & health care, sports, and safety monitoring.



Top quality products made with special spinning techniques

Premium Thobe

The thobe is the traditional dress of Muslim men in Arab countries. The fabric is considered premium when produced in Japan, and Toyobo's thobe fabric is recognized as being among the best. It is fluffy and soft. The drape produces a beautiful silhouette. It also has just the right amount of firmness and stretchiness. The thobe is the result of a special combined spinning technique, accurate weaving, and our dye processing.



Industrial fibers and civil materials

Adapts to the environment to absorb and release moisture

MOIS FINE™

With hygroscopicity three times better than wool's and five times better than cotton's, MOIS FINE™ is a special acrylate fiber that repeatedly absorbs and releases moisture in response to its surroundings. The macromolecule fiber has excellent durability and thermal resistance and can be processed into sheets and molded shapes that suit the given purpose. It is used in a variety of fields, primarily in construction materials, but also bedding, medicine, automobiles, home appliances, and more.



Synthetic leather applying our proprietary tactile sense measurements

BREATHLEATHER™

BREATHLEATHER™ is a non-sticky synthetic leather produced from a mixture of special organic polymer powder with excellent moisture absorption and release. In addition to furniture, applications include shoes, bags, automotive interior parts, and other miscellaneous uses.



Adhesives and coatings

A macromolecule water retention agent to help plants grow

ESPECK™

This liquid macromolecule water retention agent helps soil hold moisture, which is essential to plant growth. Simply spread it on the ground to improve water retention. Thanks to this ease of use, it is applied to plant and maintain vegetation for golf course greens, roadside trees, and green belts.



Wide-ranging applications include paint matte and optical diffusion

TAFTIC™

The acrylic fine particles have excellent thermal resistance, solvent resistance, and chemical resistance. In addition to a paint matte, TAFTIC™ is used for design, preventing scratches, anti-blocking, and for optical diffusion on liquid crystal light diffusion sheets.



Implementing technology to help create a sustainable society for the future.



Toyobo has worked tirelessly to improve upon polymer science (e.g., organic synthesis, polymer design, molding, surface function control) and basic technology (e.g., life science, ergonomic engineering, etc.). We are focused on accelerating the development of specialty businesses by utilizing cutting-edge analytical technology, computational chemistry, AI, and data science.

We cite our ability to provide solutions as our materiality. To provide the solutions that address the social issues of today and the future in the eyes of the end customer, we are working to obtain new technologies.

Toyobo is proactive in comprehensively protecting the results of our R&D as intellectual property covered by patent rights and otherwise. We leverage these intellectual property rights to create steady business and generate healthy profits, thus contributing to our company's sustainable growth.

Initiatives for technologies that contribute to a sustainable society

- **Resource recycling**
(Developing technologies for solvent recovery and polymer recycling, and products suitable for recycling)
- **Decarbonization**
(Technology for effective energy use, technology for capturing greenhouse gases, biopolymers)
- **Sanitary environment**
(Air cleaning, comfortable spaces, human monitoring, water treatment)
- **Medical technology that realizes high quality of life for consumers**
(Medical devices, diagnostic reagents, diagnostic equipment)

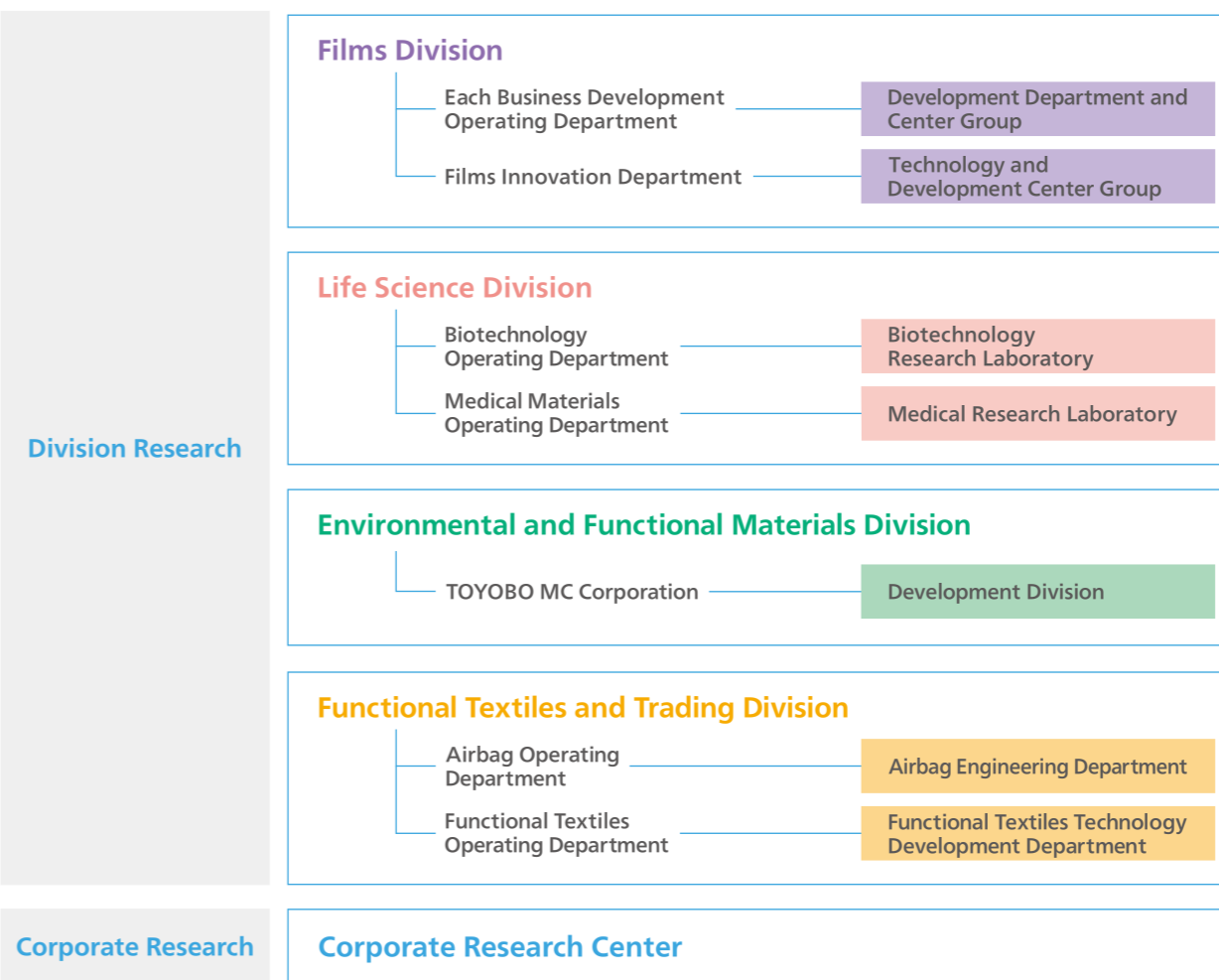
Toyobo proactively partners with industry, government, and academia in these critical domains.

Educational efforts

- Developing talent with advanced technical skills (e.g., Osaka University nanoscience and nanotechnology program)
- Programs to dispatch researchers to laboratories in Japan and abroad
- Training programs for business development (e.g., human resources academy program)

Research & development organization

Toyobo creates solutions in close cooperation with the Corporate Research Center, the Biotechnology Research Laboratory, and research departments and technical centers at production sites.



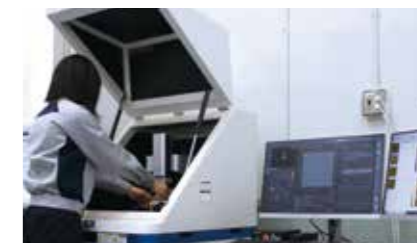
■ Division research promptly addresses diverse customer needs

There are four business divisions: Films, Life Science, Environmental and Functional Materials, and Functional Textiles and Trading. Their production, sales, and development are integrated, while each division directly manages its own R&D, forges strong partnerships with different business sectors and the Corporate Research Center, and combines proprietary technologies with those of other divisions to create something deeper. This is our approach to fast development of customer-centric products.



■ Corporate research anticipating market growth

The three-part R&D organization consists of research on basic technology, project-specific research, and company-wide infrastructure. Research on basic technology creates new businesses by improving the technology Toyobo already possesses. Project-specific research accelerates the commercialization of research. Company-wide infrastructure supports the R&D and industrial technology of Toyobo with analysis and simulations.



Working together for Toyobo's
"Safety, Disaster Prevention, and Quality"

Establishing a trustworthy Toyobo brand.



First, we established the Safety and Disaster Management Promotion Division, which specializes in safety and disaster prevention, and set up the Disaster Prevention Department and Occupational Safety Department.

In 2021, we established the Quality Assurance Division, which allows us to independently operate all safety, disaster prevention, and quality management organizations under the direct supervision of the President.

In 2022, we enhanced the main division, the Safety and Disaster Management Division, which oversees the Environmental Management Department and the Safety and Disaster Management Department.

Moving forward, we will strengthen management by cross-cutting the business division organization while cooperating with the Internal Audit Department.

Meanwhile, in 2021, we established the Risk Management Committee, chaired by the President.

To establish trust in Toyobo, the committee adopts a top-down approach to formulate group-wide risk management policy, while supervising management in general, including how organizations are built.

Revamped training, encouraging disaster readiness onsite

In addition to enhancing onsite safety training, Toyobo has established a management-level education system, and we are promoting a change in awareness so that all employees can take actions that prioritize safety and disaster prevention. In addition, we will implement measures from the aspects of hardware, software, structure, and organization, aiming for a factory that can produce safely and stably.

Training	We will raise awareness of safety as the top priority through level-based safety and disaster prevention education, including for top management. We are working to prevent accidents from fading, establishing a training center, providing company-wide safety training, securing instructors, and holding networking events that transcend divisions and departments.
Tangible action	Safety: Assess equipment and work risks and improve safety. Disaster management: Assess fire risks and upgrade fire prevention equipment.
Intangible action	Toyobo continuously improves by following the PDCA cycle in our environmental management and safety management systems. We follow uniform company-wide disaster readiness auditing standards to identify onsite risks.
Organization	We invest in disaster readiness specialists, add personnel, assign disaster management personnel to worksites, and reorganize production personnel accordingly.

Toyobo Production Bases in Japan

Tsuruga Research and Production Center	Iwakuni Production Center	Shogawa Plant	Utsunomiya Plant
Takasago Plant	Inuyama Plant	Otsu Pharmaceutical Plant	

Toyobo Group Global Network

Country/Area	Company Name	Abbr.
China	TOYOBO (SHANGHAI) CO., LTD.	TSS
China	TOYOBO AUTOMOTIVE TEXTILES (CHANGSHU) CO., LTD.	TAC
China	TOYOBO (SHANGHAI) BIOTECH CO., LTD.	TSB
China	TOYOBO MC (SHANGHAI) CO., LTD.	TMS
Hong Kong	SANTOYOKO (HONG KONG) CO., LTD.	-
Taiwan	TOYOBO (TAIWAN) CO., LTD.	TWT
Korea	TOYOBO KOREA CO., LTD.	TKR
Thailand	TOYOBO (THAILAND) CO., LTD.	TTH
Thailand	TOYOBO INDUSTRIAL MATERIAL (THAILAND) LTD.	TIM
Thailand	TOYOBO CHEMICALS (THAILAND) CO., LTD.	TCT
Thailand	TOYOBO SAHA SAFETY WEAVE CO., LTD.	TSSW
Thailand	TOYOBO INDORAMA ADVANCED FIBERS CO., LTD.	TIAF
Indonesia	PT. INDONESIA TOYOBO FILM SOLUTIONS	ITFS
Indonesia	PT.TOYOBO INDONESIA	TID
Indonesia	PT. TOYOBO MANUFACTURING INDONESIA	TMI
Indonesia	PT. TOYOBO TRIAS ECOSYAR	TTE
Indonesia	PT. TRIAS TOYOBO ASTRIA	TTA
Indonesia	PT. SHINKO TOYOBO GARMENT	STG
Malaysia	TOYOBO TEXTILE (MALAYSIA) SDN. BHD.	TTM
Vietnam	TOYOBO BINH DUONG CO., LTD.	TBD
India	TOYOBO INDIA PRIVATE LIMITED	TIN
Saudi Arabia	ARABIAN JAPANESE MEMBRANE COMPANY, LLC	AJMC
United States	TOYOBO U.S.A., INC.	TUS
United States	TOYOBO MC U.S.A., INC.	TMU
United States	TOYOBO INDUSTRIAL MATERIALS AMERICA, INC.	TIMA
Mexico	TOYOBO MC MEXICO S.A. DE C.V.	TMX
El Salvador	INDUSTRIAS UNIDAS, S.A.	IUSA
Brazil	TOYOBO DO BRASIL PARTICIPACOES LTDA.	TBR
Germany	TOYOBO CHEMICALS EUROPE GMBH	TEU
Spain	SPINREACT, S.A.U.	SPR

Toyobo Production Bases in Japan

Toyobo has seven production bases in Japan.
We support manufacturing with thorough control of quality and safety.



R&D departments with accompanying facilities
Tsuruga Research and Production Center

In addition to manufacturing bases for film & functional materials, mobility, lifestyle and environmental, and bio products, we have established a core business site which also houses R&D departments for these businesses. By equipping everything from R&D to production functions, we are able to meet the needs of our customers and also play a role as a place for on-site education and technology transfer to young engineers and researchers.



A new film production base
Utsunomiya Plant

A polyester film production plant joined Toyobo in April 2021. This center uses proprietary technology to manufacture a variety of high-performance films. They include environmentally-friendly laminating films, releasing film used for ceramic capacitors and pharmaceuticals, as well as PEN film used in cutting-edge industries for which Toyobo accounts for nearly the entire global market.



A production base for functional resins and fine chemicals
Takasago Plant

The Takasago Plant supports many different fields. It uses proprietary chemical synthesis technology to produce intermediates for pharmaceuticals and agrochemicals, as well as electronic materials and photographic chemicals. The plant also uses macromolecule modification technology to produce adhesives and coatings for automotive parts. The property contains a technical center that serves as an R&D department. This plant is always cognizant of the market and is organized to adapt quickly to sophisticated needs.



Green products and manufacturing
Iwakuni Production Center

This composite center manufactures consumer and industrial materials such as functional polyester resin, non-woven fabric and sanitary materials, as well as functional membranes for blood dialysis and seawater desalination. The environment is one of the top priorities in running our company. We take proactive action on the environment in our manufacturing. This center produces a wide range of green performance products.



A domestic base for our textile business
Shogawa Plant

In April 2024, we established a system to produce textile products from yarn to fabric as the only domestic base of our textile business by transferring the production functions of both the Inami and Nyuzen Plants to consolidate the spinning and weaving processes here at the Shogawa Plant. As a mother factory responsible for manufacturing and developing high-performance and high-quality textile products, we provide a wide range of materials and products from clothing to industrial applications.



The main plant of our film business
Inuyama Plant

This main plant of our film business produces film made from three types of raw materials: polypropylene, polyester, and nylon. The Inuyama Plant employs state-of-the-art technology to meet our customers' needs, manufacturing products for a wide range of uses, from food packaging to engineering applications. The plant is constantly changing, whether adding production equipment or improving infrastructure.



Compliant with GMP of Japan, the United States, and Europe
Otsu Pharmaceutical Plant

This contract manufacturing plant specializes in sterile injectables (in vials and pre-filled syringes) with a pharmaceutical quality assurance system that complies with regulations of Japan, the US, and Europe. We have a system in place to provide a wide range of support to meet the diverse needs of our customers, including manufacturing, visual inspection, packaging, and quality testing of investigational new drugs and commercial products, as well as various investigational studies in the early stages of drug formulation development.



The Toyobo group's global network provides advanced functions



(Packaging film, Indonesia)

OEM plant producing quality films
PT. TRIASTOYOBOASTRIA (TTA) / PT. TOYOBO TRIAS ECOSYAR (TTE)

We have two film production bases in Surabaya, Indonesia. Both are Toyobo OEM plants that manufacture film with the same high quality as in Japan. TTA will also manufacture green performance products. The transparent vapor-deposited film produced at TTE is a type of barrier film that preserves food for long periods and helps reduce food loss.



(Airbag nylon yarn, Thailand)

Response to global airbag demand
TOYOBO INDORAMA ADVANCED FIBERS CO., LTD. (TIAF)

TIAF was established in 2020 as a joint venture between Toyobo and Indorama Polyester Industries PCL (IPI), a subsidiary of Indorama Ventures PCL, a major Thai petrochemical product company. TIAF built a new yarn plant for automotive airbags on the IPI site. This joint venture will utilize the resources of Toyobo and Indorama group to respond to the growing demand for airbags.



(Bio material, Spain)

Health from Catalonia to the world
SPINREACT, S.A.U.

Spinreact, S.A.U. operates in Catalonia, Spain. The company was established in 1975 to develop, produce and sell in vitro diagnostic reagents in the Garrotxa area which has a picturesque view of the Pyrenees. Spinreact became a member of our corporate group in 2013. The products are exported to over 100 countries and contribute to medical care and health.



(Airbag fabrics, China)

Production and sale of airbag fabrics for China
TOYOBO AUTOMOTIVE TEXTILES (CHANGSHU) CO., LTD.

Toyobo Automotive Textiles was established in Changshu, Jiangsu Province to supply airbag fabrics to our auto parts manufacturing customers in China. The company is a joint venture between Toyobo and Toyota Tsusho Corporation. Since its establishment in 2011, the company has endeavored with production every day to deliver quality products to customers.



(Polymerization, Thailand)

VYLON™ from the "Land of Smiles" to the world
TOYOBO CHEMICALS (THAILAND) CO., LTD.

Our first overseas polymerization plant, established in 2012 as a joint venture with Mitsubishi Corporation. In 2014, we began commercial production of copolymerized polyester VYLON™, and in 2018, we upgraded manufacturing facilities and started producing engineering plastic PELPRENE™. VYLON™ is exported to about 20 countries around the world.



(Fibers, Malaysia)

The next generation of filament and staple fiber composite technology
TOYOBO TEXTILE (MALAYSIA) SDN. BHD.

PERAK TEXTILE MILLS SDN. BHD., established in 1974, is the parent organization of this rare plant that manufactures and sells staple fiber, worsted spinning products, and their fabrics. It plays a part in the global supply chain for our textile business. The plant also produces spun yarn and fabrics with high added value from combinations of synthetic staple and filament fibers, and natural fibers.



(Fibers, El Salvador)

The first Japanese company established in Central America
INDUSTRIAS UNIDAS, S.A.

INDUSTRIAS UNIDAS, S.A. was founded in 1955 in El Salvador, Central America. We are a manufacturer and distributor of textile products with an integrated process from spinning to processed fabric. The market is mainly domestic and Central American countries, as well as North America and the Caribbean countries. In addition to general apparel, we manufacture working uniforms as specialized materials by utilizing Toyobo's technology, and are characterized by quick market response taking advantage of our location.



(Engineering plastic, Brazil)

Toyobo's only engineering plastics plant outside Japan
TOYOBO DO BRASIL PARTICIPACOES LTDA.

Located in the Brazilian city of Americana, Sao Paulo, we manufacture high-performance resins made from polyester, polyamide, and other materials. Established in 2015 as Toyobo's own production base of resins in South America, we offer solutions to auto parts manufacturers both domestically and abroad.



(Airbag fabrics, United States)

From production of raw yarn to sales of airbag fabrics
TOYOBO INDUSTRIAL MATERIALS AMERICA, INC.

This plant was established in 2012 primarily to sell airbag fabrics to North American customers. The raw yarn uses PHP products. The weaving is contracted to STW, which uses technology meeting the same standards as those at other Toyobo locations. Both the raw yarn and the weaving companies have offices on this property, allowing the site to handle everything from raw yarn manufacture to sales. Toyobo was the first company in the world to set up a facility like this for airbag fabrics.



(Aqua membranes, Saudi Arabia)

Production and sale of HOLLOSEP™ RO (Reverse Osmosis)
ARABIAN JAPANESE MEMBRANE COMPANY, LLC

This HOLLOSEP™ RO (Reverse Osmosis) production and sales company was established in Saudi Arabia in 2010. It provides steady local production and quality products to contribute to customers in the Middle East. We regularly visit desalination plants so we can offer technology and services tailored to local needs and develop products together with our customers.

Toyobo Group Global Network