

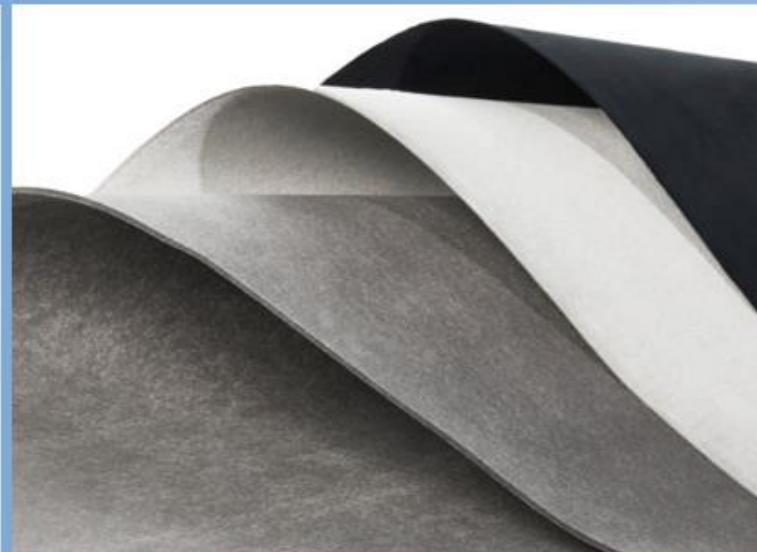
TORAY IR Day
Medium-term Management Program
Project AP-G 2025

Fibers & Textiles Business

June 9, 2023

Kenichiro Miki

Senior Vice President, General Manager, Fibers & Textiles Division
Toray Industries, Inc.



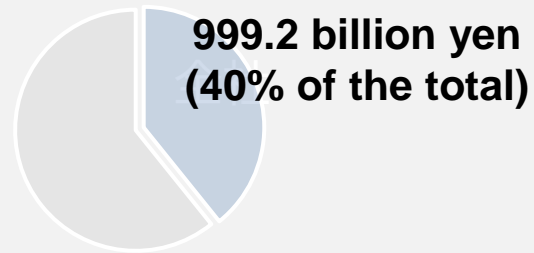
- I. Outline of Toray's Fibers & Textiles Business and its Strength**
- II. Reviewing the Medium-Term Management Program, Project AP-G 2022**
- III. Business Environment and Trends in Demand**
- IV. Medium-term Management Program, Project AP-G 2025**
- V. Target for FY 2025**

I

Outline of Toray Group Fibers & Textiles Business and its Strength

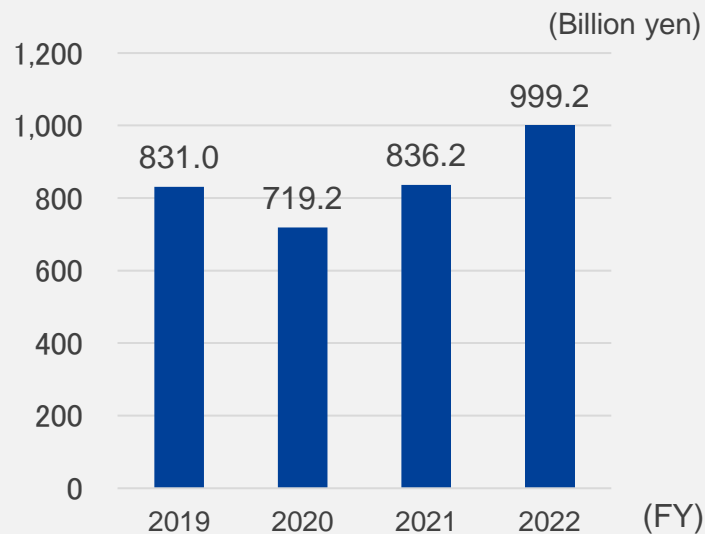
Position within the Fibers & Textiles Segment

Revenue in FY 2022



- Businesses for all the three major synthetic fibers (nylon, polyester, and acrylic). Supply chain integrated businesses from fibers, textiles to garments
- Industrial applications including textile for airbags and nonwoven fabrics
- Global operation including China and Southeast Asia

Trend in Revenue



< Main products and businesses >



Nylon fibers
Polyester fibers
Acrylic fibers



Textiles



Nonwoven fabrics for
hygiene products



Fibers and textiles
for airbags



Garments



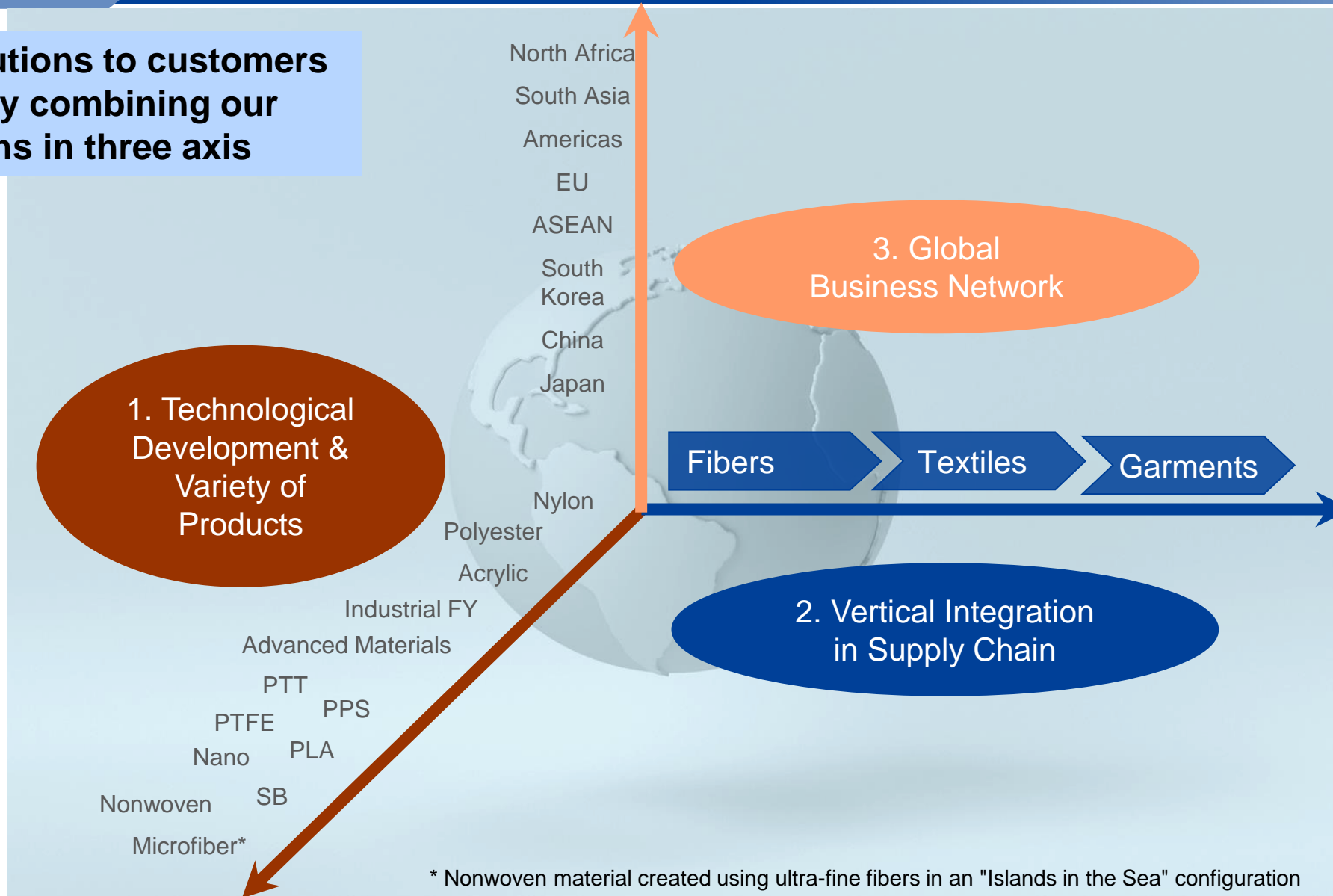
Protective clothing



Artificial leathers

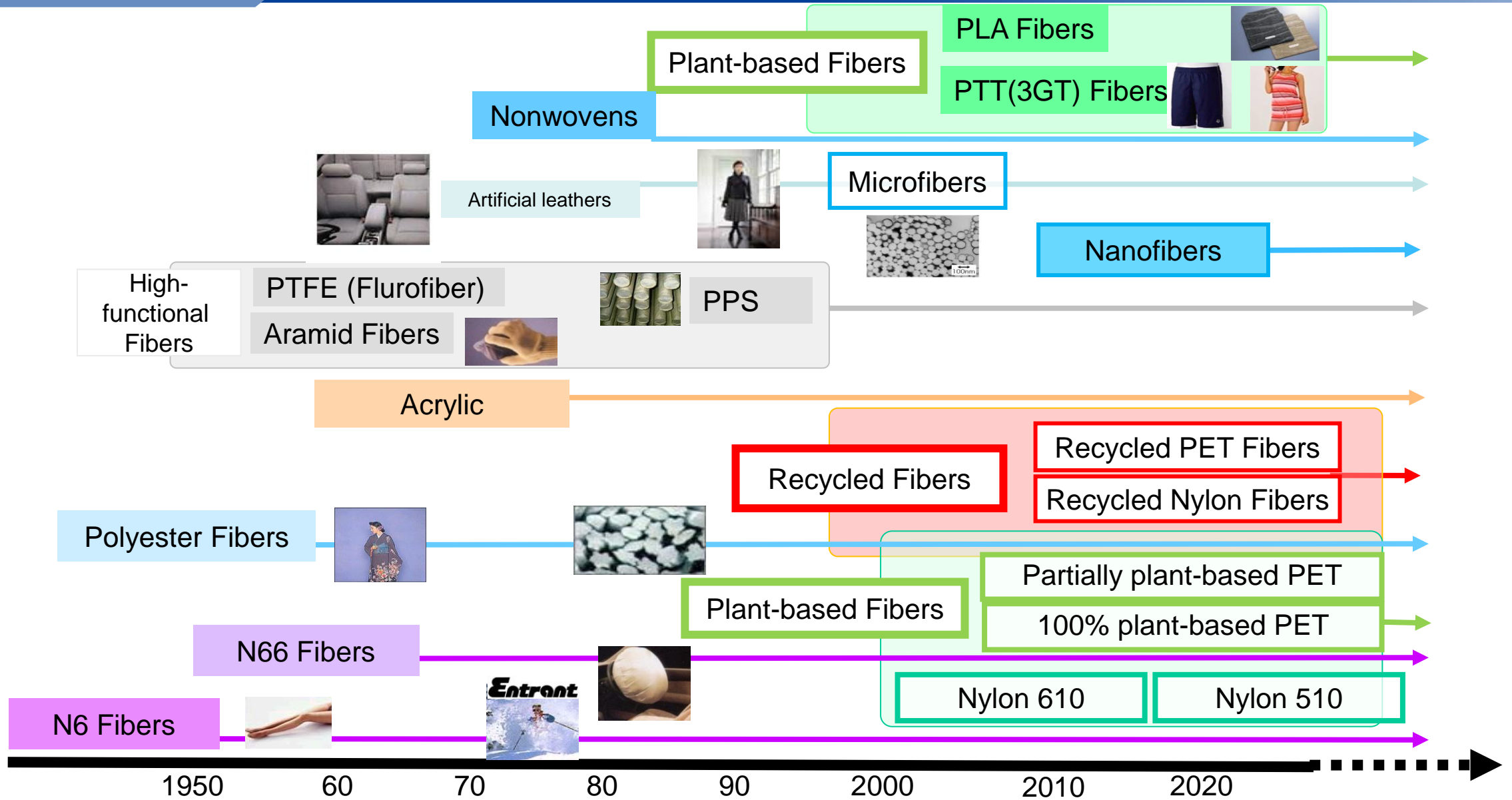
Strength of Toray's Fibers & Textiles Business : World's only Three Dimensional Business Model

Provide solutions to customers
with freely combining our
strengths in three axis

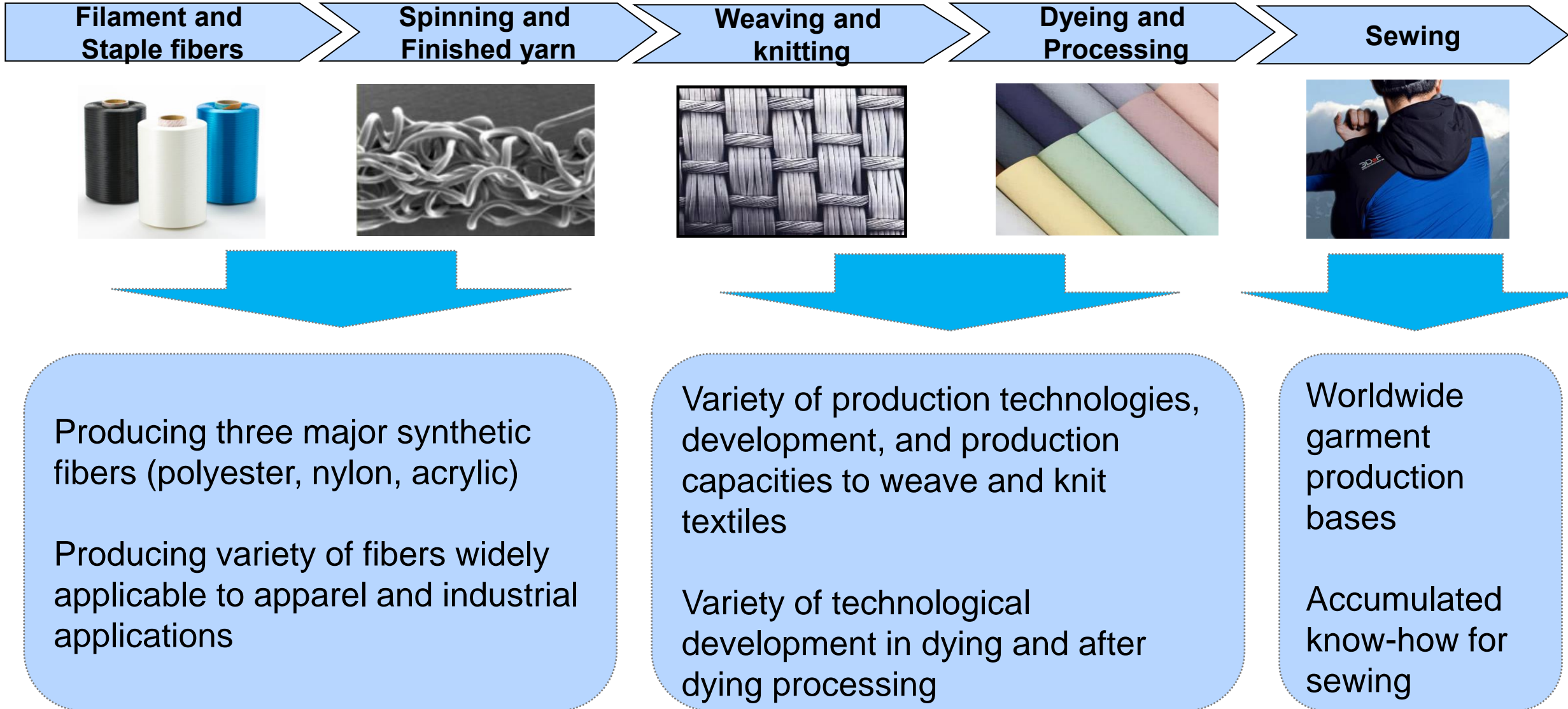


* Nonwoven material created using ultra-fine fibers in an "Islands in the Sea" configuration

Three Dimensional Business Model (1): . Technological Development & Variety of Products



Three Dimensional Business Model (2): Vertical Integration in Supply Chain - From Raw Materials to Garments -



Three Dimensional Business Model (3): Global Business Network

Toray Group's global production bases for Fibers & Textiles Business
(17 countries, 28 bases)

As of March 2023

Europe and Africa

- UK**
TTEL (Weaving, Dyeing)
- Czech Republic**
TTCE (Weaving, Dyeing)
- Italy**
Alcantara (Ultra-microfiber non-woven fabric with suede texture)
- Sweden**
Alva (Head Office)
- Portugal/Tunisia**
Alva (Airbag cushions)

Asia

- Vietnam**
VTF (Twisted Yarn)
THKVN (Sewing)
- Thailand**
TTS (N-FY,P-FY)
TTT (P/C&P/R Spinning, Weaving, Knitting, Dyeing)
- Indonesia**
ITS (N-FY,P-FY,P-SF)
ISTEM (P/R Spinning, Weaving, Dyeing)
ACTEM (A spinning)
ETX (P/C Spinning, Weaving)
CTX (P/C Spinning, Weaving, Dyeing)
TPJ (Nonwoven)
- India**
TID (Nonwoven)
TKAT(Weaving)
- Japan**
Toray N-FY·SF,P-FY·SF,A-SF, Nonwoven, Ultra-microfiber non-woven fabric with suede texture, Flurofiber
- China**
TFNL (N-FY,P-FY)
TSD (Weaving, Knitting, Dyeing)
TPN (Nonwoven)
TPF (Nonwoven)
- South Korea**
TAK (P-FY,P-SF, Weaving, Dyeing, Nonwoven)
- Hong Kong**
THK (Sewing HQ)
- Malaysia**
PFR(P-SF)
PAB(P/C Weaving)

Americas

- USA**
TFA (Flurofiber)
- Mexico**
TAMX (N-FY, Weaving)

N = Nylon
P = Polyester
A = Acrylic
C = Cotton
R = Rayon
FY = Filament Yarn
SF = Staple Fiber

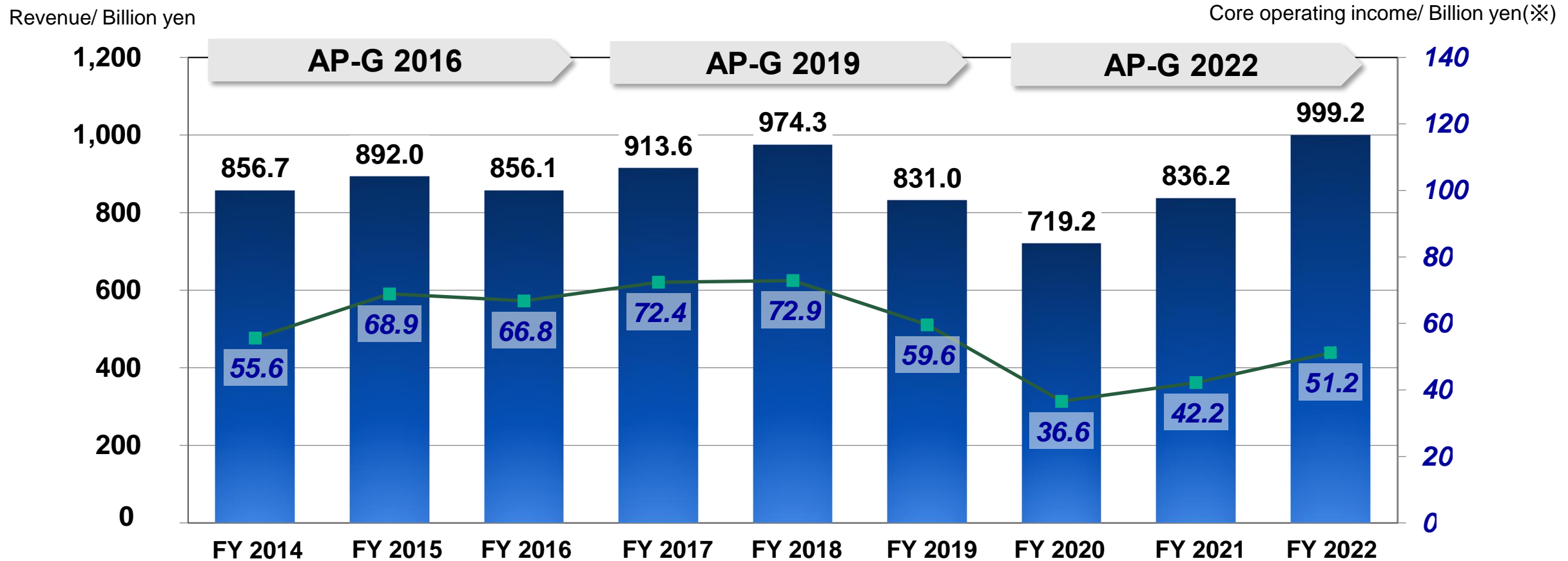
Fiber, Textile, Artificial leather, Sewing

II

Reviewing the Medium-Term Management Program, Project AP-G 2022

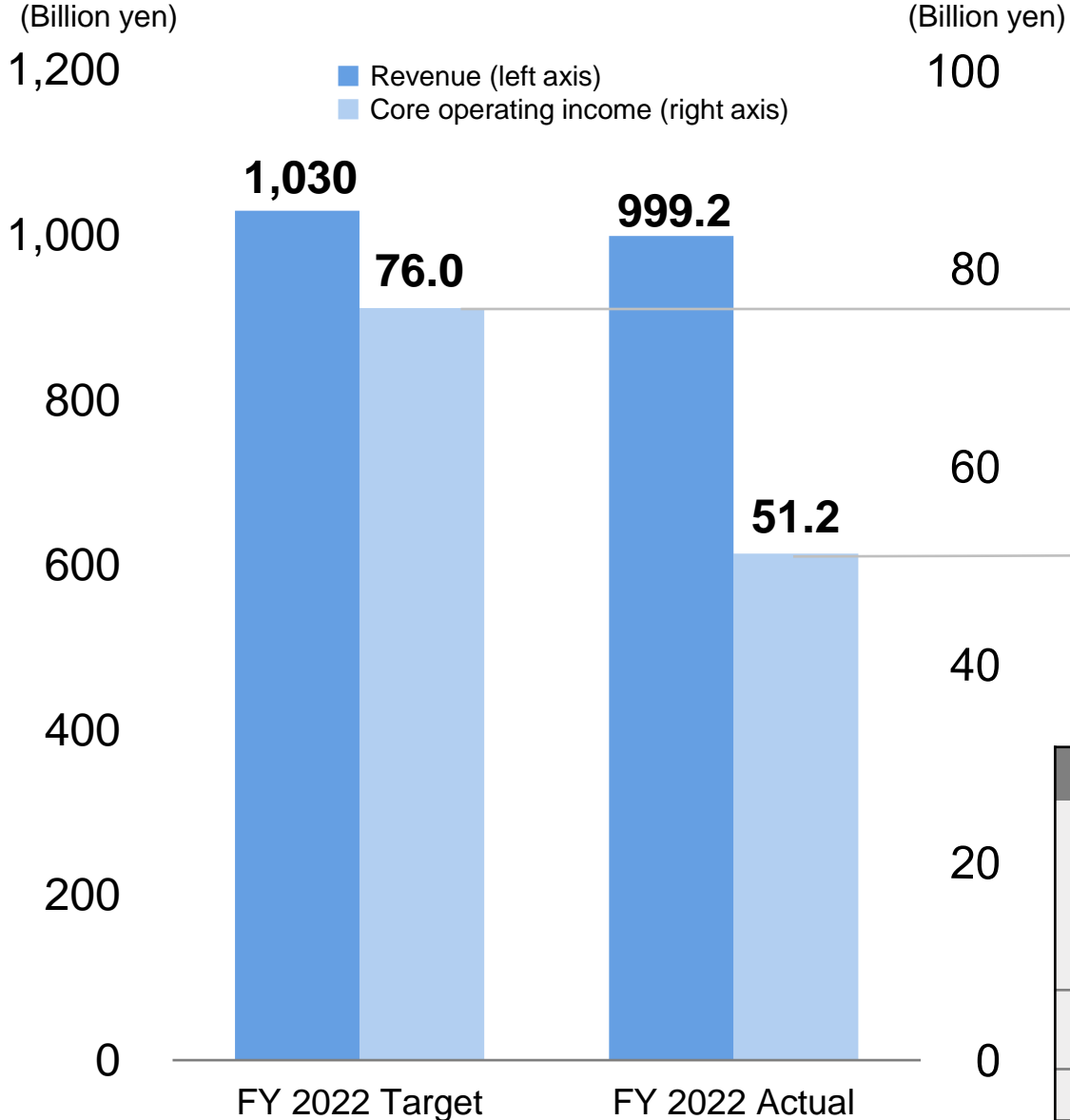
Business Results of Fibers & Textiles Segment

After reaching the bottom in FY 2020, revenue and core operating income has steadily improved, increasing y-o-y in both FY 2021 and FY 2022.



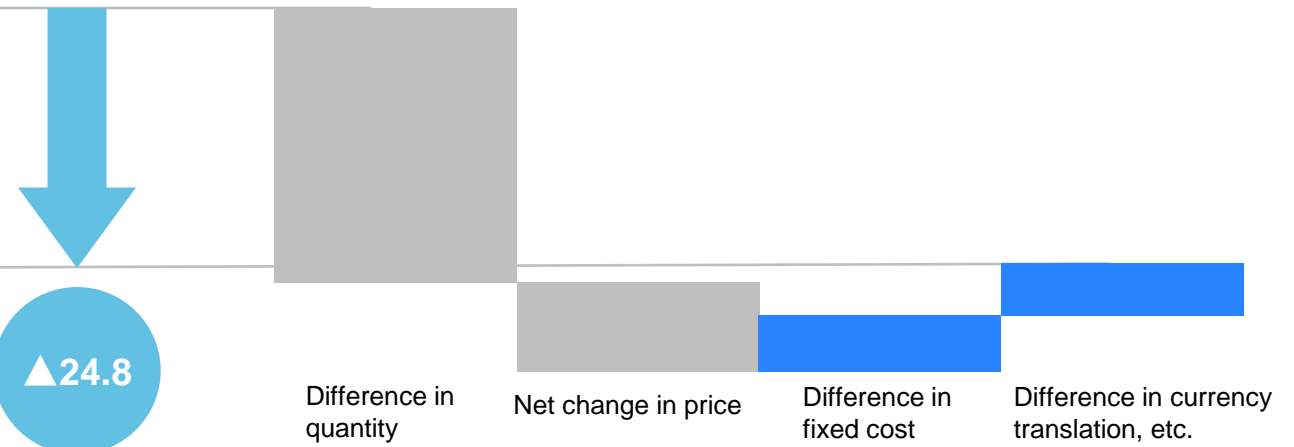
※ ~FY 2018 Operating income (J-GAAP) FY 2019~Core operating income (IFRS)

Reviewing the Medium-Term Management Program, Project AP-G 2022



<Summary>

Due mainly to the stagnation of economic business activities stemming from the expansion of COVID-19 infection and difference in quantity caused by changes in market structures, core operating income in FY 2022 was lower than the target of AP-G 2022. Steady progress was made in addressing the issues within each basic strategy.



Difference	Main Factors
Difference in quantity	<ul style="list-style-type: none"> • Demand decrease in fiber business • Demand decrease in automobile applications, harsh competition in nonwoven fabrics for hygiene products • Decrease in demand due to market changes in ASEAN countries
Net change in price	<ul style="list-style-type: none"> • Surge in raw materials and fuel prices as well as transportation costs, etc.
Fixed cost	<ul style="list-style-type: none"> • Controlling fixed cost for decrease in quantities

Reviewing the Medium-Term Management Program, Project AP-G 2022

Basic Strategies	Achievements
Global expansion in growth business fields	<ul style="list-style-type: none"> ● Ultrasuede® and Alcantara®: Automobile interior applications expanded in Japan and Italy ● Airbag: Business field was expanded by sewing business growth ● Nonwoven fabric business: Expanded PET spunbond production capacity in Japan and South Korea
Business growth through sustainability measures	<ul style="list-style-type: none"> ● Expanded green Innovation and Life Innovation businesses ● Started full-fledged expansion of PET bottle recycling “&+”
Advancement of business models	<ul style="list-style-type: none"> ● Extended and improved the integrated supply chain in Vietnam ● Enhanced global textile brands
Expansion of value-added products	<ul style="list-style-type: none"> ● Advancement of textile products utilizing NANODESIGN™
Strengthening the corporate structure	<ul style="list-style-type: none"> ● Promoted structure reform of low-growth and low-profitability businesses

III

Business Environment and Trends in Demand

Business Environment Surrounding the Fibers & Textile business

Change in demand structure by the pandemic

- Demand decrease in formal clothing (e.g. dress shirts), pantyhose, and linings for garments
- Demand increase in sports/outdoor and interior related products, expansion of e-commerce

Increase in awareness of environmental and social issues

- Accelerating practical measures for transition to circular economy by countries and companies
- Attitude for the human rights issues became stricter in the international society

Environmental changes in the backdrop of geopolitical risks

- Surging raw material and energy prices due to the conflict between Russia and Ukraine and global inflation
- Disperse procurement to avoid disorder of supply chains and logistics midst of the pandemic, accelerating local production for local consumption

IV

**Medium-term Management Program,
Project AP-G 2025**

- Long term vision of Fibers & Textiles -

Through Toray group's fibers & textiles products, provide new value and enrich the lives of people around the world



- AP-G 2025 Basic policy of Fibers & Textiles Business -

Aim for sustainable growth with high profitability through realization of foundation enhancement and advancement of products, for promoting measures for a sustainable world, and through global business expansion in growth business fields

- Business Strategies -

- 1 Improving profitability by ultimate value creation
- 2 Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally responsible materials
- 3 Product and operational excellence

Project AP-G 2025: Growth Strategies of Fibers & Textiles Business

1 Improving profitability by ultimate value creation

2 Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally responsible materials

3 Product and operational excellence

Growth strategies: (1) Improving Profitability by Ultimate Value Creation Global Expansion of Business for Ultrasuede® and Alcantara®

With two brand strategies, Ultrasuede® and Alcantara®, at its core, continuously promoting brand value enhancement, and expanding the business globally mainly in fashion and automobile interiors.

ultrasuede®

<Toray Industries Ultrasuede Dept. (Japan)>

Advanced material brand from Japan made by
Toray's leading-edge technology

Beautiful Possibilities

Expand customers' potential and providing value beyond expectation

Under the Ultrasuede vision of "To enrich society through empowered creativity and materials evolution," we will work with customers to increase the brand value each other.

ALCANTARA®

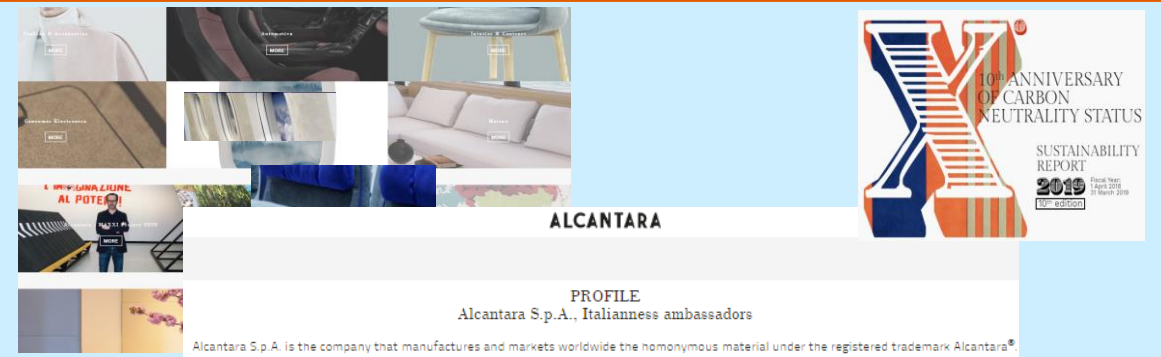
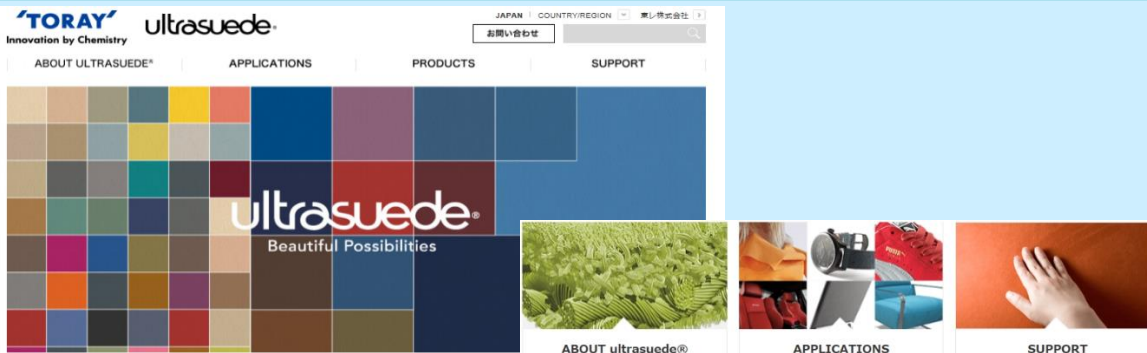
<Alcantara S.p.A, (Italy)>

"Made in Italy" by original creativity and craftsmanship
Luxury brand focusing on sustainability

Extraordinary Every Day

Sublime technologies and commitment to sustainability

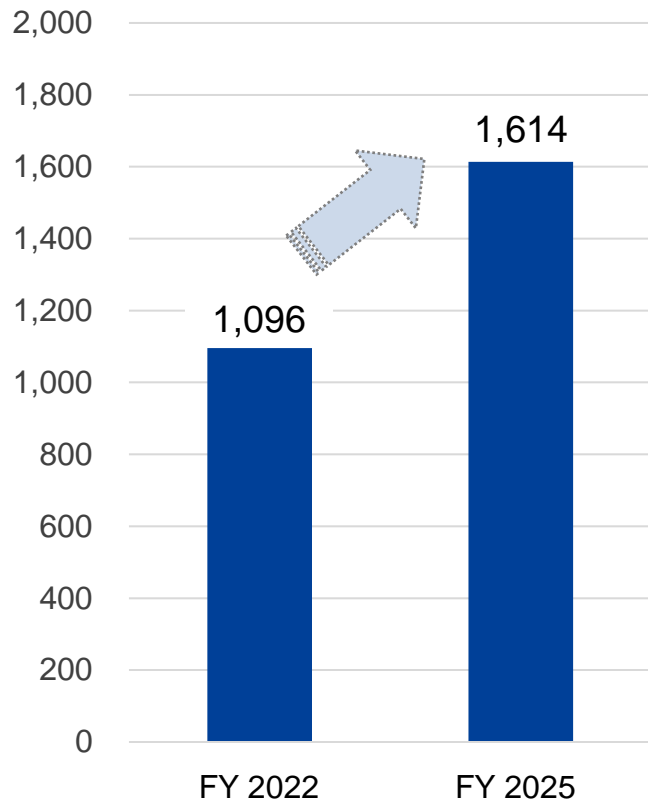
Through constant dialogue with people active in the world of creation, ALCANTARA® continues to evolve with trust from global companies around the world.



Growth strategies: (1) Improving Profitability by Ultimate Value Creation Global Expansion of Business for Ultrasuede® and Alcantara®

Sales Target

(Unit: 1,000 m²/month)



Business Environment

- Demand for artificial leather is on an upward trend as it is replacing natural leather.
- Automotive production in global is expected to grow at an annual rate of 3% per year while **EV production is forecasted to grow rapidly, at an annual rate of 37%, 500% increase by 2028, compared to 2022**

Toray's Strengths

- **Wide range of product variations** in fiber fineness and thickness enable multi-purpose use, including automobile interior, fashion, upholstery, accessory, and consumer electronics.
- Providing options to customers by **increasing the variety of environmentally friendly products** certified as carbon neutral or made from recycled PET/partially bio-based PET.

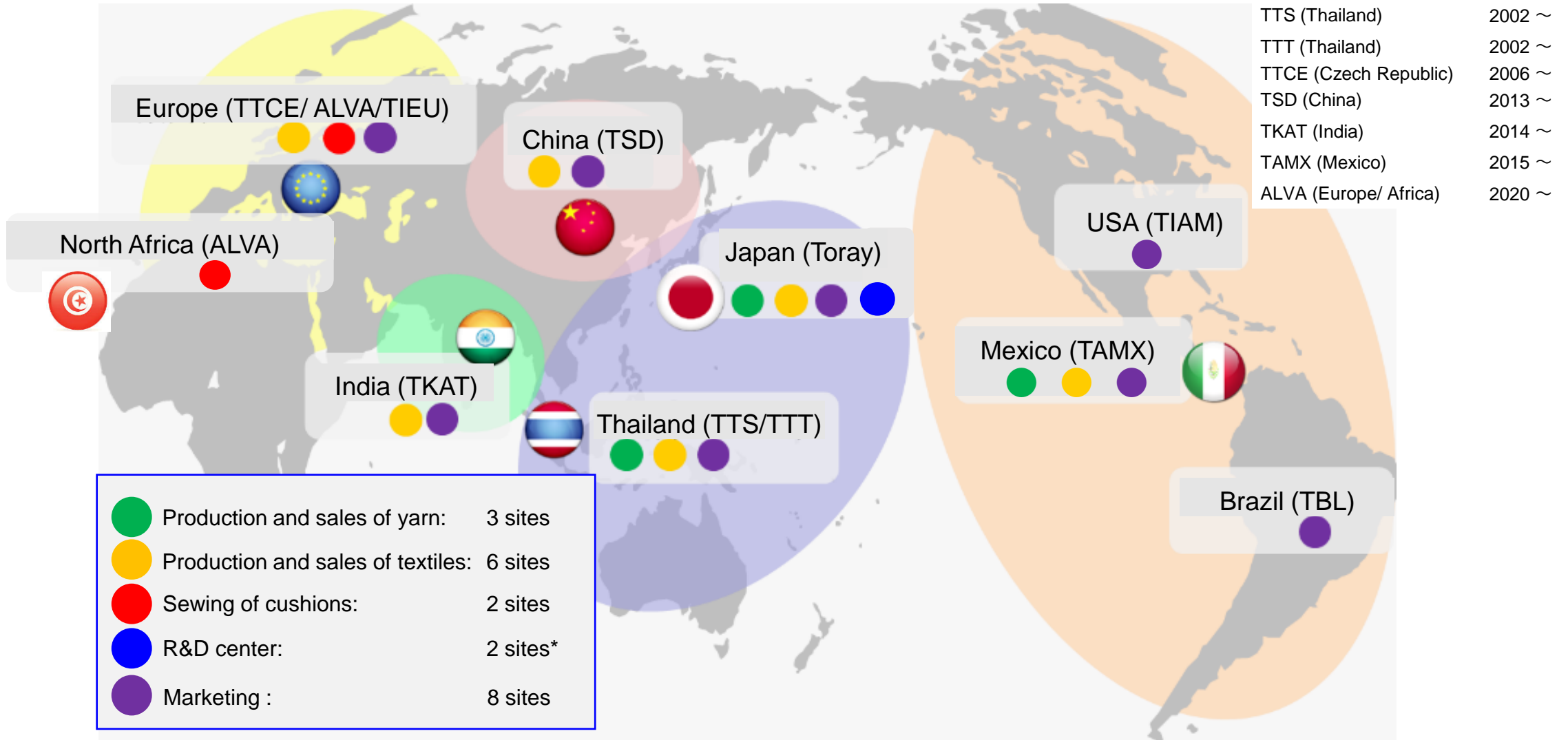
Business Strategies

- Differentiation from competitors by maintaining and strengthening the **two-brand strategy Ultrasuede® and Alcantara®,** including environmentally friendly materials.
- Ultrasuede® and Alcantara® always developing **high-added-value materials with “Tailor Made Production”** such as lamination with other materials to satisfy customers' demand.
- **Production expansion for Ultrasuede®.** Expect to **start operations at the end of 2024.**

Growth strategies: (1) Improving Profitability by Ultimate Value Creation

Airbag Business: Enhancing the Global Supply Chain

Linking regions, organizations, product bases to make use of technical resource, connections and know-how



Growth strategies: (1) Improving Profitability by Ultimate Value Creation

Airbag Business: Advancement of Global Supply Chain



Started airbag fibers and fabrics business in Japan

Production of airbag fabrics started in ASEAN countries, China and Europe

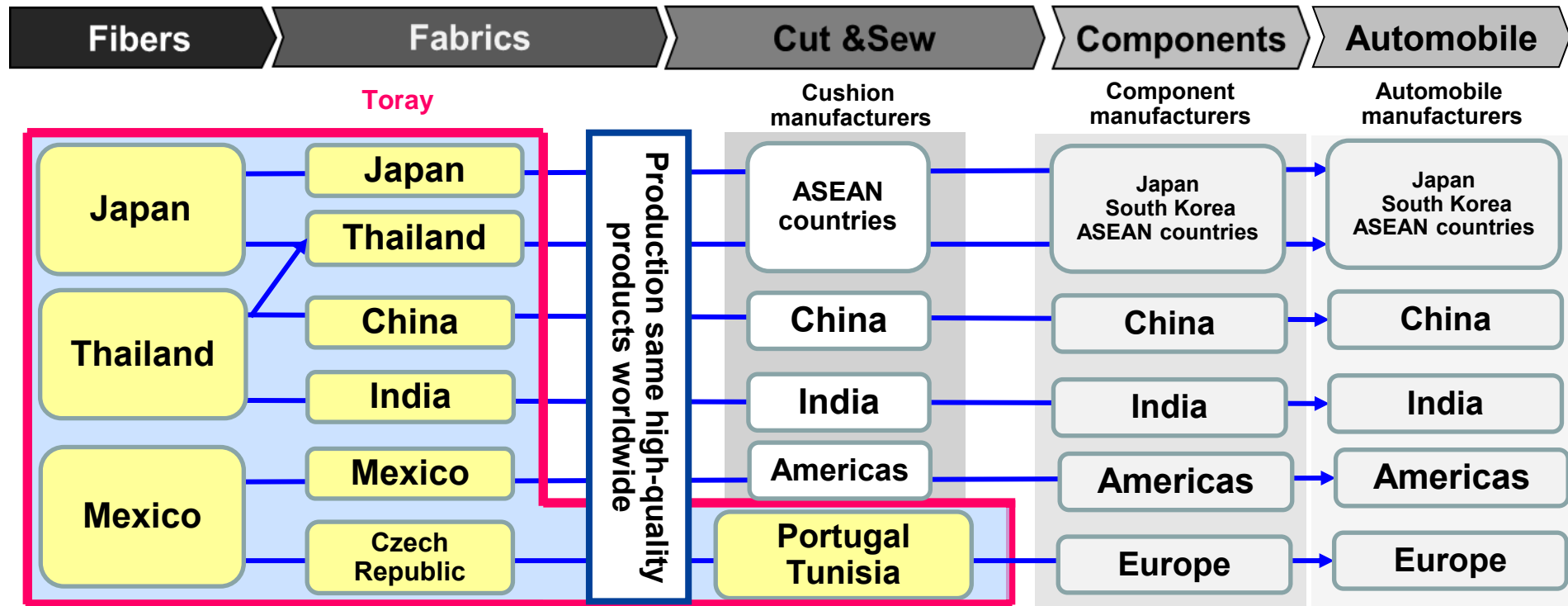
Started airbag fabrics business in India and Americas

Acquired a company producing cushions for automotive airbag systems

Shift from sales of fibers to fabrics for airbag applications

Established global supply chain that covers major production areas for automobiles and can provide the **same high-quality airbag fabrics** worldwide

Constructed an integrated supply chain including cutting and sewing
Established R&D system



Growth strategies: (1) Improving Profitability by Ultimate Value Creation

Expansion Strategies of Airbag Business

Business environment

- Demand expanded due to recovery of automobile production, increase of airbag installment rate in emerging countries

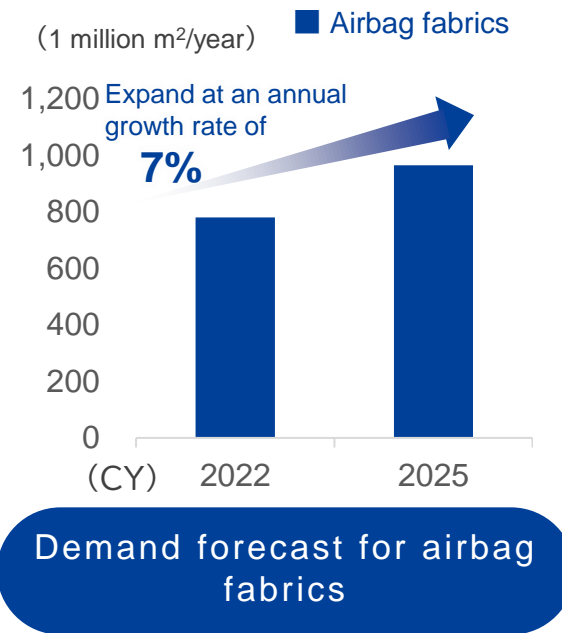
Automobile production

82 million units per year in 2022 → 90 million units per year in 2025

Airbag installment rate

Expanded mainly in emerging countries (e.g.: in India, installing 6 airbags in a car has become mandatory).

- Market needs
 - ◆ Global supply chain
 - ◆ Ensuring stable supply for growing demand
 - ◆ Responsiveness in development targeted at autonomous driving and sustainability



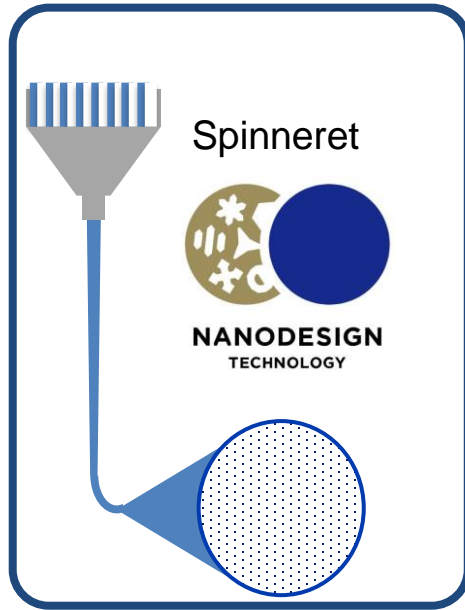
Business strategies

- **Improving and/or increasing capacity of production facilities** to meet increasing demand in India, China, ASEAN countries and Americas
- **Business advancement** by expanding cutting & sewing business
- **Strengthening next-generation development** focused on autonomous driving

Aiming to expand business beyond the demand growth of airbag fabrics, leveraging our strengths, global supply chain, and business model integrating fibers, fabrics, and cutting & sewing

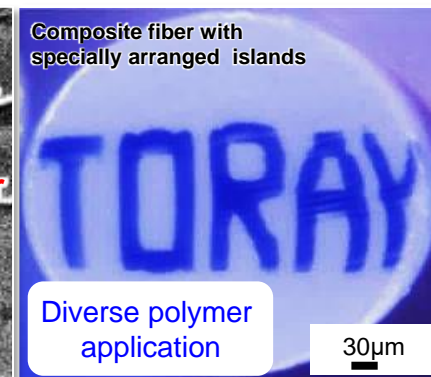
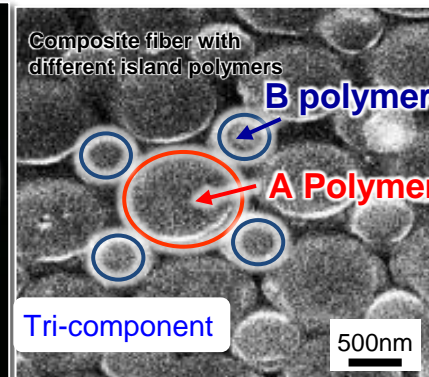
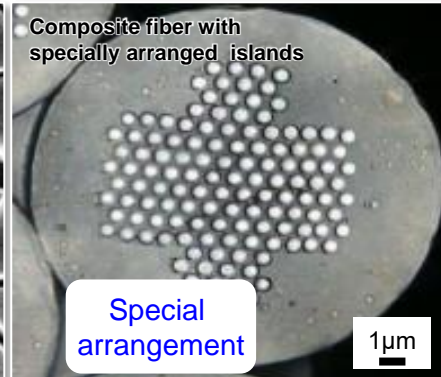
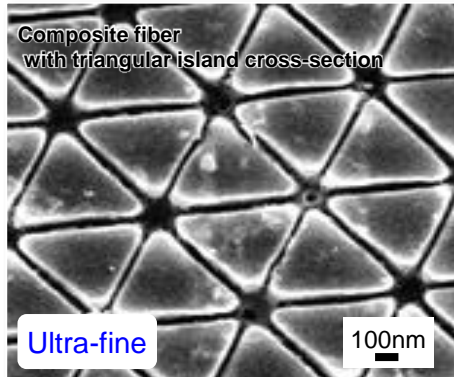
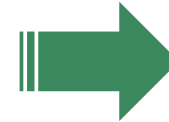
Growth strategies: (1) Improving Profitability by Ultimate Value Creation

Adding Higher Value Utilizing Toray's Unique Technologies: NANODESIGN™





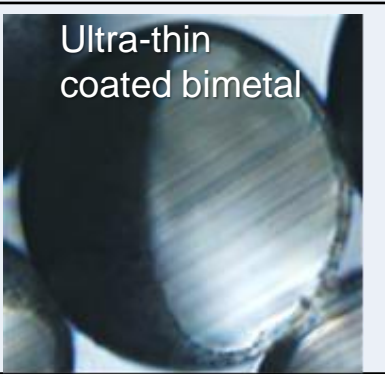
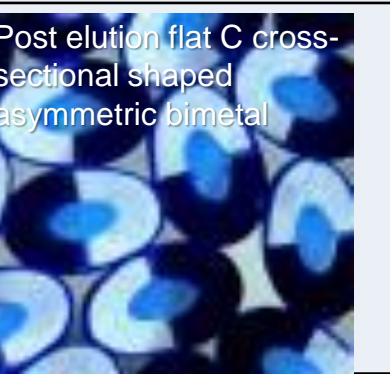
Cross-sectional shape of the fiber to be designed on a nano-order basis

<Comparing to the conventional technology (concept)>



Utilizing Toray's unique technologies that enable to control precisely various "fineness" and "shapes" provides higher added-value to bio-based and recycled fibers

Major Products (already in the market)

<p>uts-fit™</p> <ul style="list-style-type: none"> • Smooth and sleek texture • Bulkiness, retention of shape • Rich in stretchability 	<p>Bimetal islands in the sea</p> 	<p>Kinari™</p> <ul style="list-style-type: none"> • Luster that surpasses silk • Noble glaze, rustling sound of silk • Easy to process and sewing, looking beautiful when tailored 	<p>Cross-sectional imitation of silk</p> 
<p>Qticle™</p> <ul style="list-style-type: none"> • Natural and deep color • Elastic and stretchable 	<p>Ultra-thin coated bimetal</p> 	<p>Camifu™</p> <ul style="list-style-type: none"> • Warm texture • Lightness, elasticity • Functional additives retainability 	<p>Post elution flat C cross-sectional shaped asymmetric bimetal</p> 

Awards: Technology Award of The Society of Fiber Science and Technology; Grand Prix of Senken Gosen Award Material Division; Chemical Society of Japan's Award for Technical Development, etc.

Continuously creates advanced materials by NANODESIGN™

Project AP-G 2025: Growth Strategies of Fibers & Textiles Business

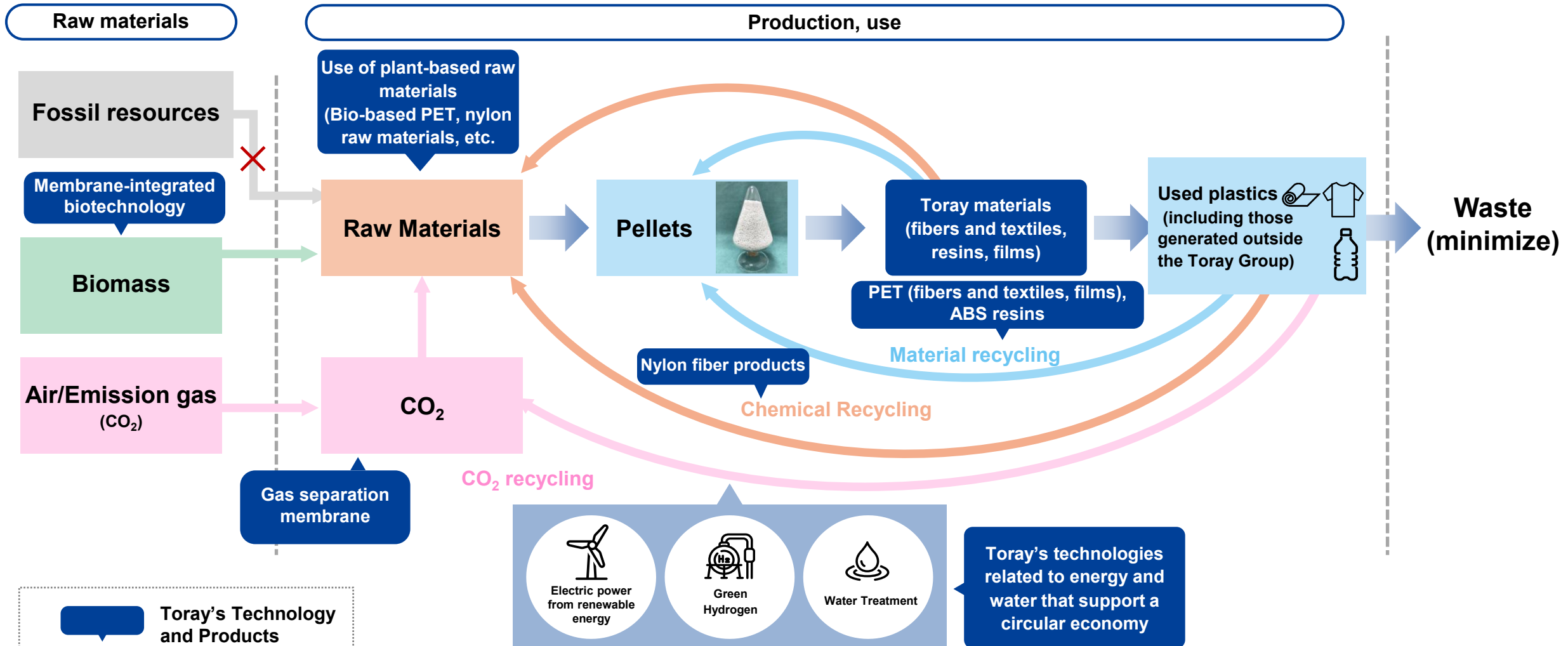
1 Improving profitability by ultimate value creation

2 Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally responsible materials

3 Product and operational excellence

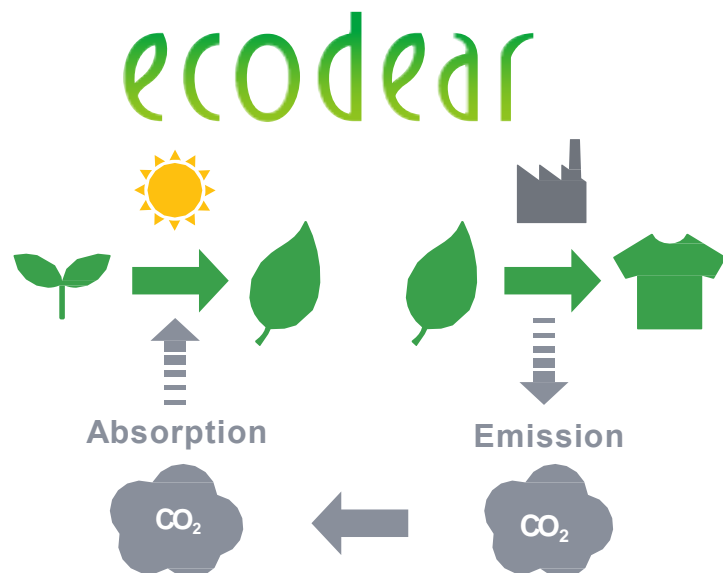
Toray's Initiatives for Realization of a Circular Economy

- Across the Group, accelerating initiatives including the following: bio-based materials and pellets; material and chemical recycling; CO₂ recycling
- In the fibers and textiles business, development and sales expansion are currently progressing for bio-based and recycled materials, which have evolved utilizing Toray's unique technologies



Strategies for Biomass-Based and Recycling Brands

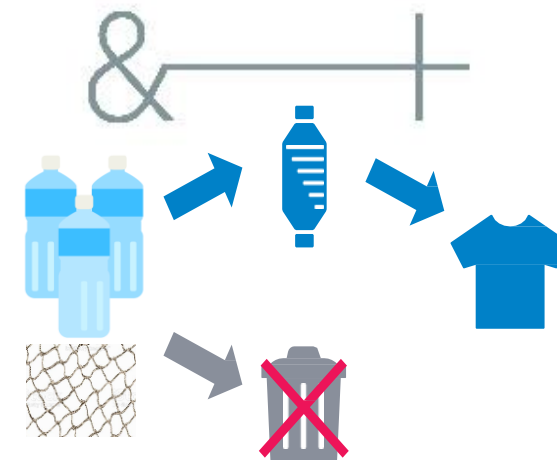
Biomass-based (Ecodear™)



- Plant-based carbon contained in the plant-based synthetic fibers is atmospheric CO₂ absorbed by plants during photosynthesis.
- Even if this plant-based materials are incinerated, the plant-based carbon contained in the products will be returned to the atmosphere and will not affect the atmospheric CO₂ concentration.

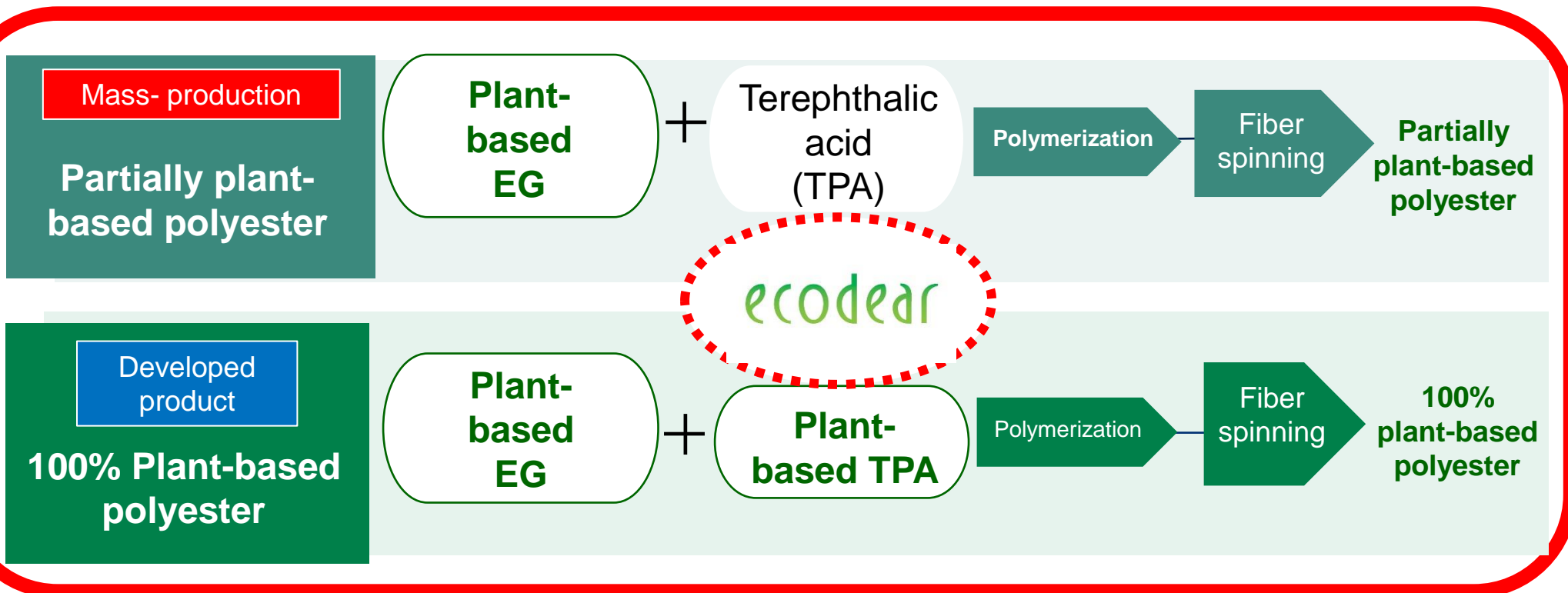
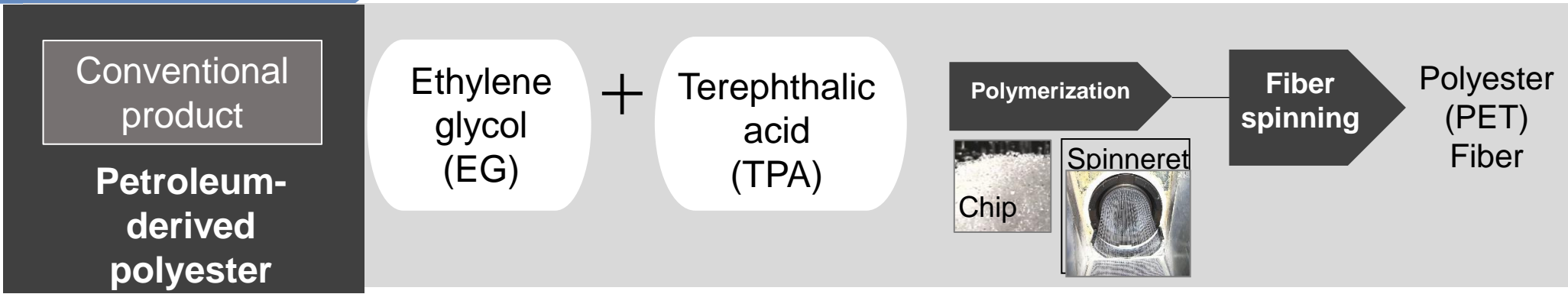
Recycling (&+™)

Brand focused on recycled fibers & textile products containing post-consumer materials as raw materials



- Raw materials are wastes such as collected PET bottles and fishing nets, which are made mainly from post-consumer materials.
- The Company recycles waste generated outside the Toray Group to reduce consumption of limited and precious fossil resources and also contributes to waste reduction.

Development and Expanding of Plant-based Polyester Ecodear™ PET

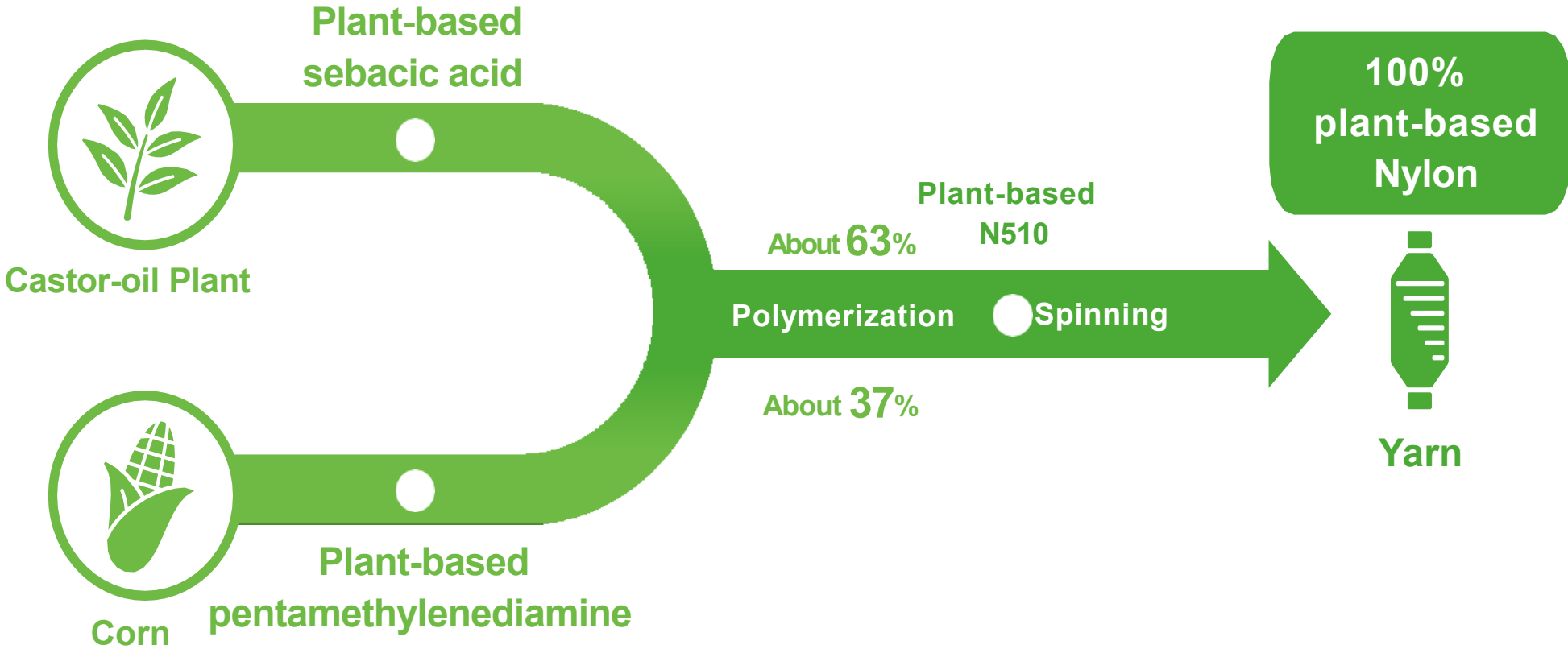


Conversion to non-fossil fuel-based materials

Contributing to CO₂ emission reduction of products through value chains

Developing and Expanding Plant-based Nylon Ecodear™ N510

Ecodear™ N510 is 100% plant-based*1 nylon fiber which is made by polymerizing sebacic acid (from castor-oil plants) and pentamethylenediamine (from corn) and spinning.



(*1:ISO16620-1 3.1.5 biobased synthetic polymer content (percentage of plant-based material) is 100 %)

Example of Development and Expansion of 100% Plant-based Fibers

Pre-marketing example of 100% Plant-based Polyester



Patagonia's Sugar Down



Ultrasuede™ nu: Head rest covers for ANA's "Future Promise" project, a specially painted aircraft



©ISSEY MIYAKE INC

RESONANT SUIT PB: shown at ISSEY MIYAKE's Spring-Summer Collection 2023

100% Plant-based Nylon Ecodear™ N510

(from news release on January 14, 2022)

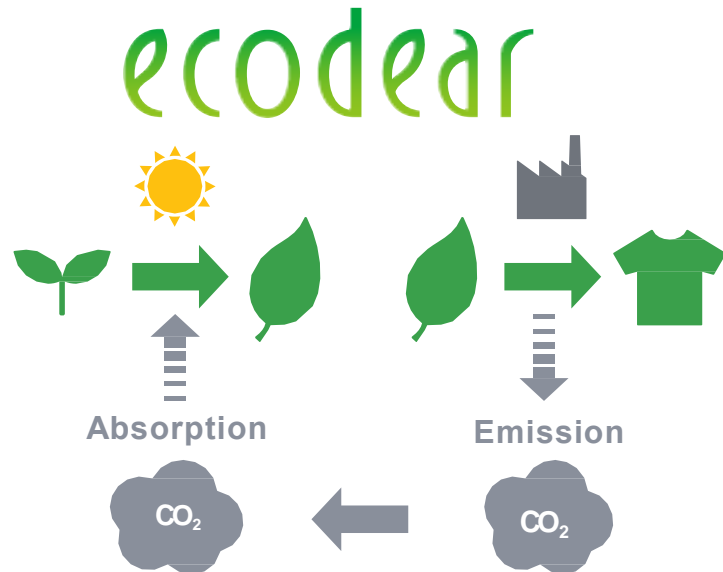


Sports, outdoor, leg, inner applications

Ecodear™ N510 is 100% plant-based*1 nylon fiber which is made by polymerizing sebacic acid (from castor-oil plants) and pentamethylenediamine (from corn) and spinning.

Strategies for Biomass-Based/ Recycling Brands

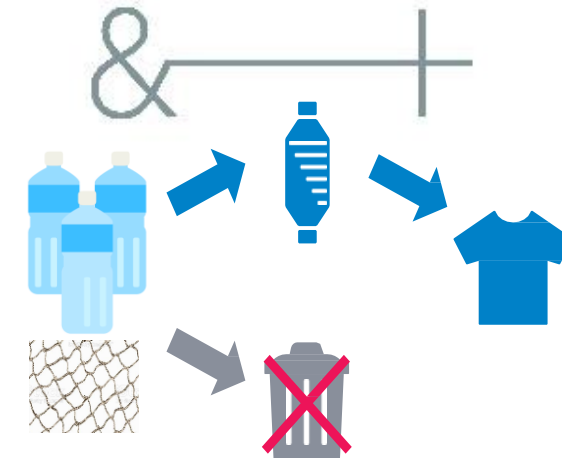
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Fibers & Textiles Recycling Business Brand “&+”

- Recycling Fibers & Textiles brand characterized by “high-added-value” and “traceability”
- Post-consumer materials are mainly used as raw materials. In addition to polyester made from collected PET bottles as a raw material, nylon made from a portion of collected fishing nets has been newly commercialized.
- Projects and activities that “consumers and various organizations participate in and share the brand story”, which is a distinctive feature of the brand, are expanding

* “&+” made from collected garments has not been commercialized yet, but will be developed in the future.

[Thoughts behind the naming and logo](#)

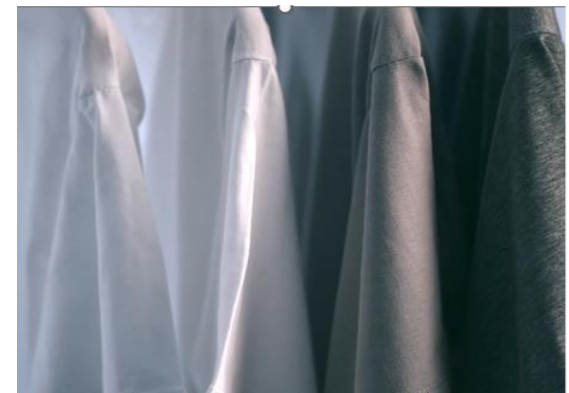
Recycling business is made possible by involving the people around us. When everyone's thoughts and actions for the future are connected with “&,” value of “+ (plus)” is created.

Connecting
thoughts and action

Recycled materials + potential
(=Upgraded recycling)

And

Plus



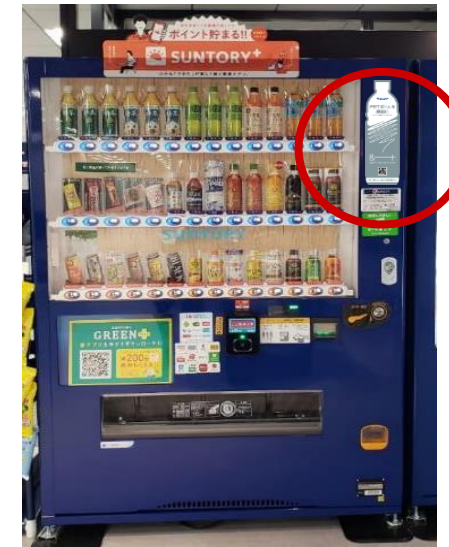
Business Strategies: (2) Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally responsible materials
Examples of initiative on &+™ in Japan

Tokyo Marathon



Activities to produce &+™ yarn from PET bottles collected at the venue and recycle it into volunteer wear for the next year onwards

Collecting PET bottles at Toray's plants and offices in Japan



Activities to produce &+™ yarn from PET bottles collected from vending machines installed in the Company

Strengthening brand power by communicating the appeal of &+™, which contributes to the environment through resource circulation

Business Strategies:(2) Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally responsible materials

Examples of Initiative on “&+” Outside Japan

Starting initiatives for promoting recycled polyester fibers with the Penang state government at Toray Malaysia, Penang.



Demonstration of PET bottle recycling by the Penang state government and Toray Malaysia

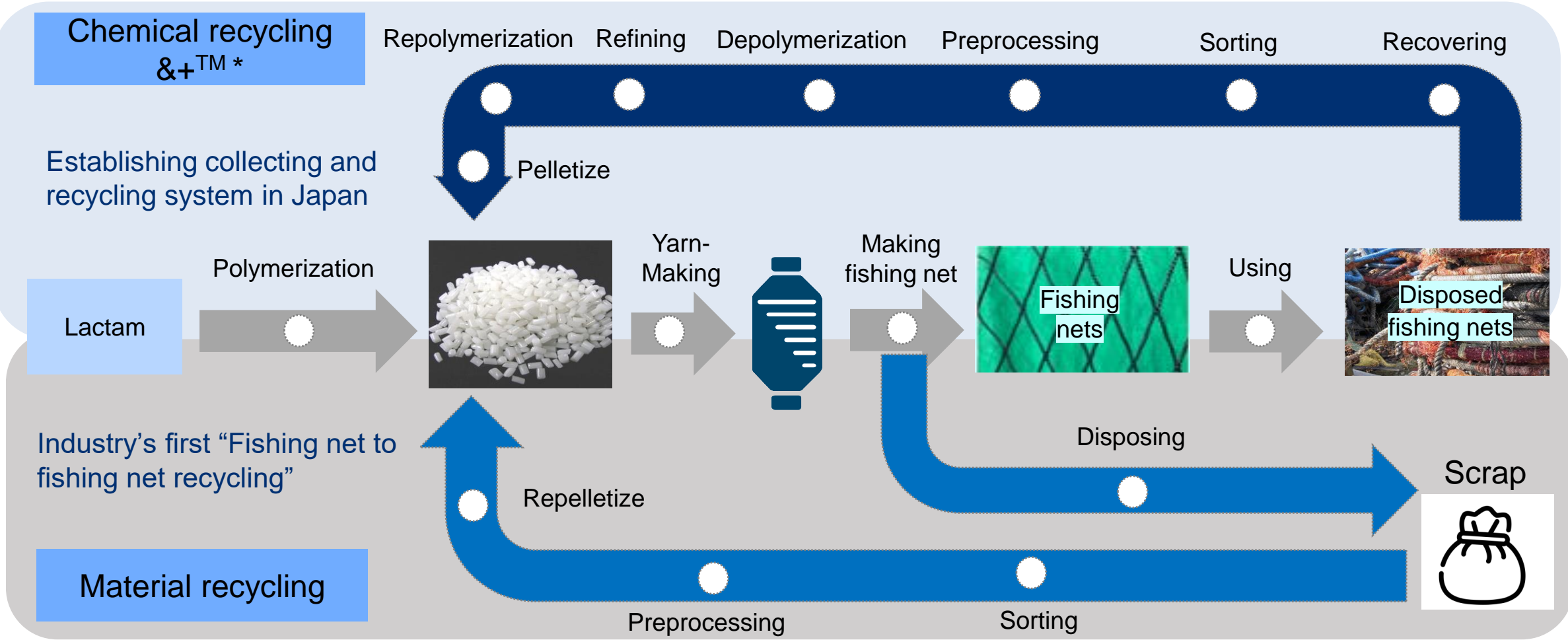


Donating shirts for school uniforms to local elementary schools. They were produced as uniforms using fabric made from yarns from PET bottles collected at a Toray Malaysia facility.



Collecting PET bottles at Toray Malaysia

Nylon Recycling: Examples of raw materials derived from fishing nets



*Currently preparing to acquire international certifications, GRS and RCS

Initiatives to realize a sustainable circular economy

Project AP-G 2025: Growth Strategies of Fibers & Textiles Business

- 1 Improving profitability by ultimate value creation
- 2 Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally responsible materials
- 3 Product and operational excellence

Business Strategies: (3) Product and operational excellence Enhancing Global Megabrand Expansion



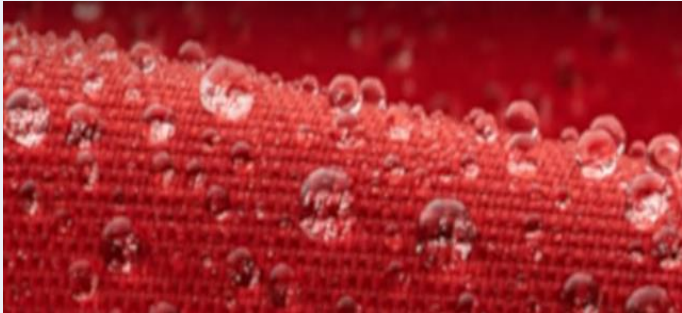
Advanced nylon and polyester fabric made of Toray's unique thin yarns, light and compact, with soft textures



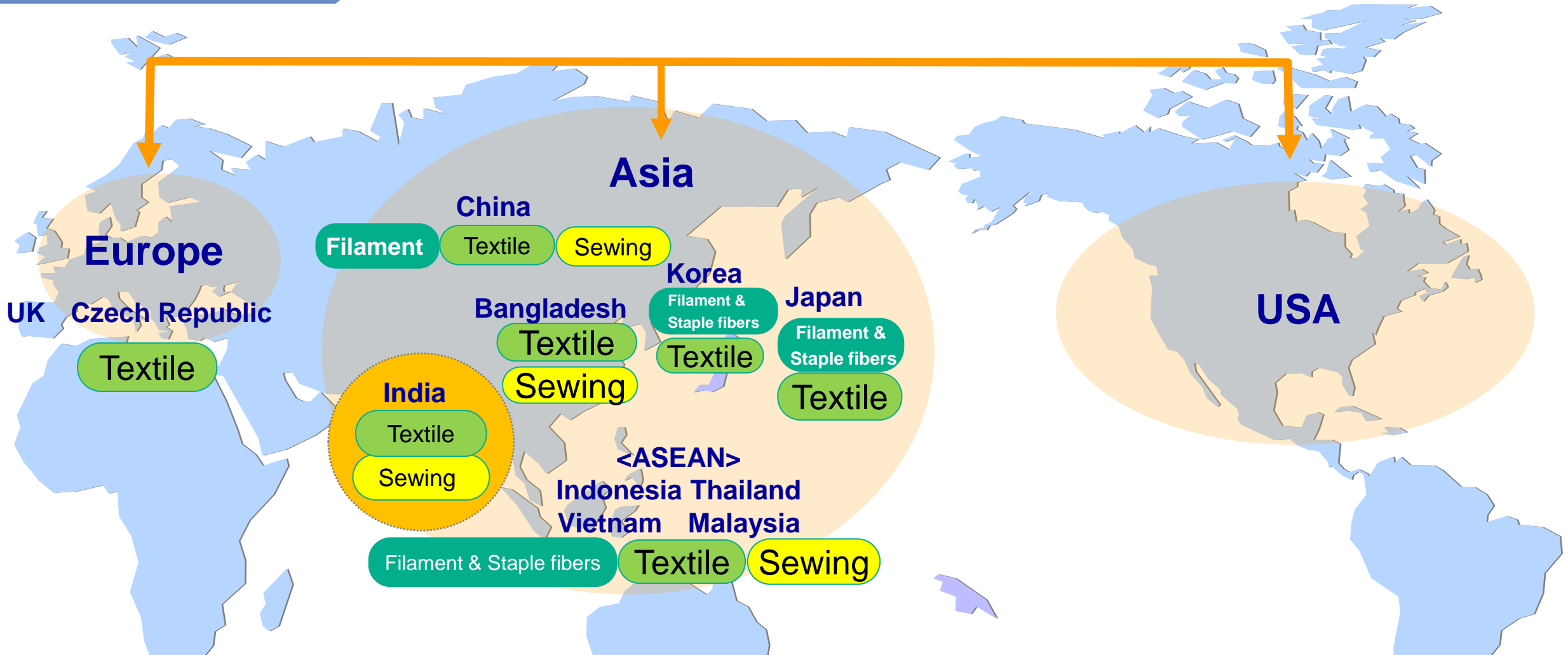
Advanced fabric with flexible and stretching texture. Has durability, lightness, comfortability, fast-drying properties, applicable to various purposes



Functional fabric offering a high level of water resistance, breathability and resistance to condensation, as well as excellent elasticity



Strengthening Global Supply Chains of Apparel Applications



- Responding flexibly to customer needs with integrated business from raw yarn and cotton, textiles to sewing
- Proceeding with establishing supply chain for Indian market.

Business Structure Reform for Low-growth and Low-profitability Businesses

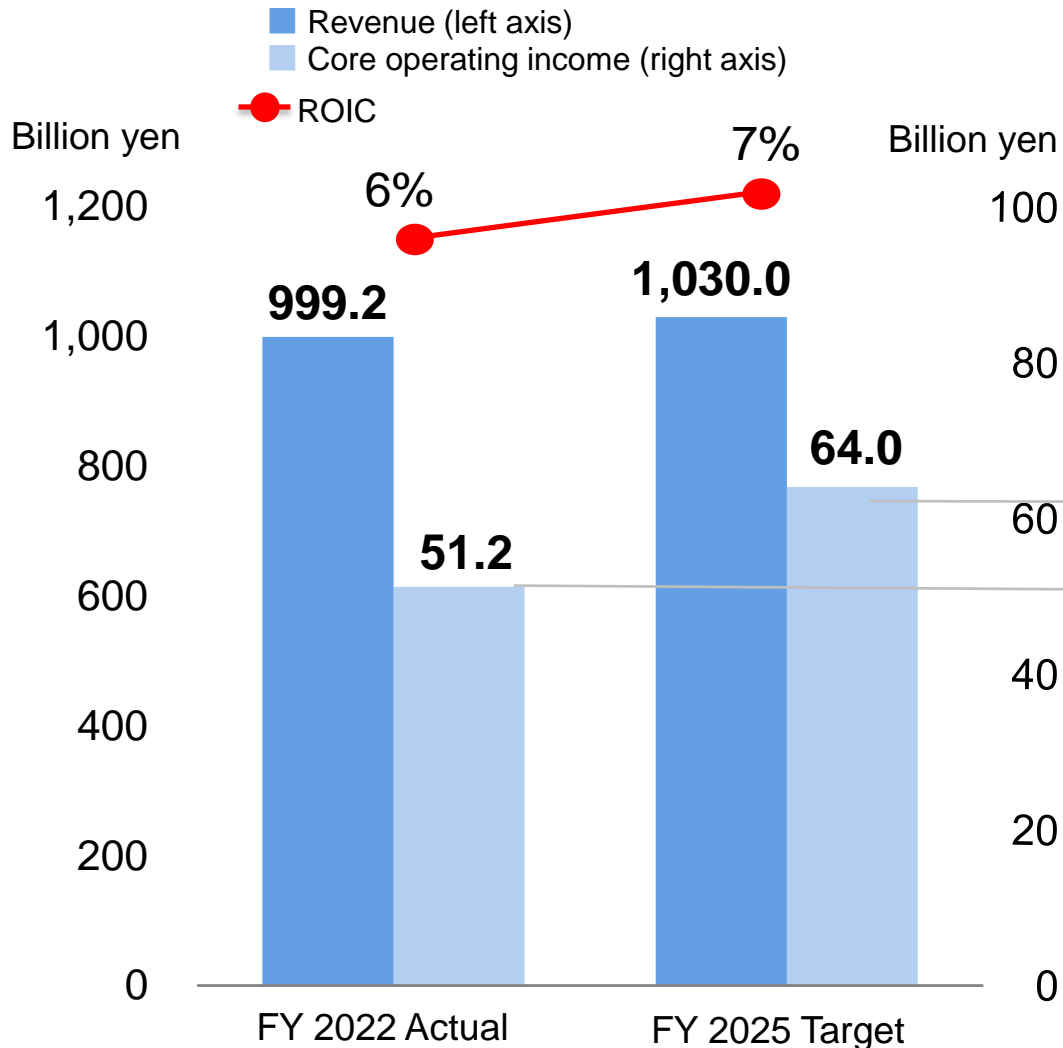
Aiming to improve profit foundation, steadily implement business structure reform plans for low-growth and low-profitability businesses developed in the AP-G 2022.

Businesses	Business structure reform
Polyester / cotton fabric business	<ul style="list-style-type: none">● Reviewing production capacity of spinning, weaving, dyeing in 4 production bases in ASEAN countries and enhancing group operation.● Conversion of applications: expansion of the uniform and casual wear applications.
Nylon fiber business	<ul style="list-style-type: none">● Optimizing global production capacity of 2 plants in Japan and 3 production sites outside Japan● Enhancing expansion of environmentally responsible materials including recycled/ bio-based materials.● Increasing sales of textiles by specially made products and higher-level processing.
Affiliates of fiber in Japan	<ul style="list-style-type: none">● Stop or suspend of the low-profitability businesses, given the analysis of business structures for each company, in addition to the business portfolio to shift to the high-profit businesses.

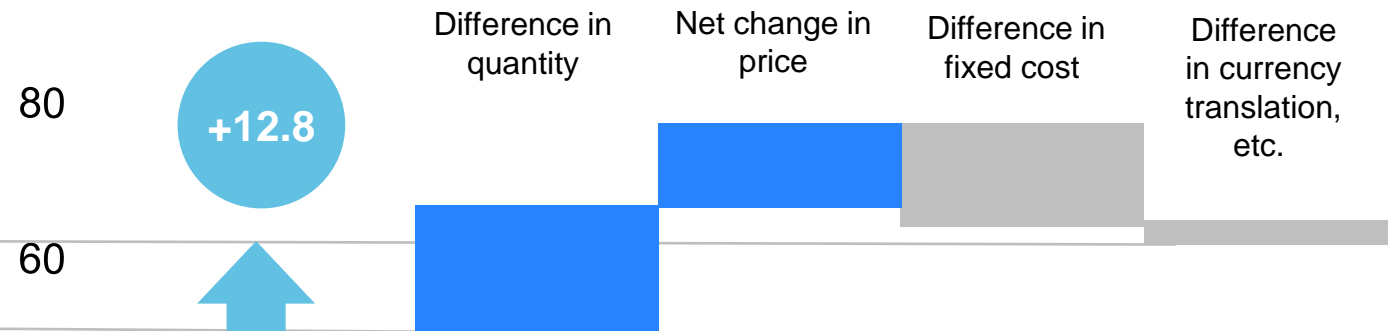
V

Target for FY2025

Target for FY 2025: Aiming Sustainable Growth with Profitability



Target of core operating income for FY 2025 is 64.0 billion yen, up 12.8 billion yen compared to FY 2022, from expansion of growth business fields we have been working on since AP-G 2022, promoting high-added-value creation, improving profitability by implementing structure reform for low-growth and low-profitability business, and expansion of environmentally responsible materials.



Variance	Main Factors
Difference in quantity	<ul style="list-style-type: none"> Expansion of business growth fields such as airbag and artificial leathers Capturing recovering demand for integrated apparel business Sales expansion of textile with advanced functions and high-added-value
Net change in price	<ul style="list-style-type: none"> Expansion of high-added-value such as NANODESIGN™ products Proceeding with passing on the rise in raw material and fuel prices to the sales price Business structure reform for low-growth and low profitability
Difference in fixed cost	<ul style="list-style-type: none"> Expansion of new production lines for products including airbag and artificial leathers Increase of expenses and labor cost due to expansion of sales activities

Descriptions of predicted business results, projections and business plans contained in this material are based on assumptions and forecasts regarding the future business environment, made at the time of publication.

Information provided in this material does not constitute any guarantee concerning the Toray Group's future performance.

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