TORAY IR Day
Medium-Term Management Program Project AP-G 2025
Toray Group’s Measures for Ultimate Value Creation

June 5, 2023
Mitsuo Ohya
Executive Vice President and Representative Member of the Board, Toray Industries, Inc.
I. Medium-Term Management Program, Project AP-G 2025
   - Strategies to Seize Profit Opportunities
     I-1. Measures for Ultimate Value Creation, etc.
     I-2. Improving Asset Efficiency

II. AP-G 2025 Target
Toray Group will achieve sustainable growth driven by the Sustainability Innovation Business and the Digital Innovation Business.

Five Basic Strategies of Project AP-G 2025

**Seizing Profit Opportunities**

**Strategy 1. Sustainable growth**
Focusing management resources on Sustainability Innovation Business and Digital Innovation Business

**Strategy 2. Ultimate value creation**
Maximizing profitability by making the most of tangible and intangible assets, and by collaborating with external partners

**Strategy 3. Product and operational excellence**
Promoting cross-organizational cost reduction activities leveraging enhancement of quality strength and organizational strength, which are the sources of competitiveness

**Strengthening the Management Foundation**

**Strategy 4. Enhancement of people-centric management**
Preserving and further building upon the legacy of our corporate culture, which prioritizes developing people, while promoting individual career development, and improving job satisfaction

**Strategy 5. Risk management and governance**
Ensuring sound organizational management by enhancing internal controls and improving management capabilities
Expanding revenues from businesses related to Sustainability Innovation Business and Digital Innovation Business to about 60% of total

**Growth Business Fields under AP-G 2025**

1. Products that accelerate measures to counter climate change
2. Products that facilitate sustainable, recycling-based use of resources and production
3. Products that help provide clean water and air and reduce environmental impact
4. Products that help deliver better medical care and hygiene for people worldwide

**New**

**DI Business**

**Digital Innovation Business**

**Materials, equipment, technologies, and services that help improve convenience and productivity by supporting the widespread adoption of digital technology**

**GR Business**

**Green Innovation Business**

**LI Business**

**Life Innovation Business**

**Seizing Profit Opportunities**

**Toray Group Growth Business Fields**

Revenue from Growth Business Fields

- **2022 Forecast**
  - Growth business fields 54%
  - Gross profit margin of all growth business fields 20%

- **2025 Target**
  - Growth business fields 59%
  - Gross profit margin of all growth business fields 23%

**Investment in growth business fields**

- Capital Investment: 270 Billion Yen
- R&D: 180 Billion Yen

**Breakdown**
450 Billion Yen
By making the most of the Toray Group’s strengths, enhancing our ability to create value while strengthening our competitiveness to seize new profit opportunities.

The Toray Group's Strengths

- Proposing solutions based on materials
- Creating new technologies through the pursuit of ultimate limits and technology integration
- Demonstrating the collective strengths of our R&D organizations
- Ensuring a stable supply of high-quality products
- Building a global value chain

Ultimate value creation

- By pairing tangible and intangible assets, work to extend value chains and create cross-organizational value
- Create new businesses that help solve social issues

Enhancing product and operational excellence

- Further improve quality, which is the cornerstone of the Toray Group brand
- Promote cross-organizational cost reduction activities that leverage the Group’s collective strengths

Create High Added Value for Businesses

New Business Creation

Enhancing Quality Strength

Enhancing Cost Competitiveness
Measures for Ultimate Value Creation

1. Group-wide Action to Support Growth Business Fields
2. Refining Sales Operational Capabilities, Enriching and Extending the Value Chain
3. Employing Strategic Pricing
4. Enhancing Brand Value
Toray expands the applications of a single polymer to diverse fields such as fibers & textiles, films, and resins, and uses it in a wide range of processes from polymerization to processed products. Toray will leverage its unique strengths in global operations to expand the resource recycling market to its advantage.
1. Group-wide Action to Support Growth Business Fields: Mobility

Deliver speedy solutions leveraging cross-organizational, product, and regional collaboration

Corporate Marketing Planning Division
Next Mobility Dept.

APG management committees, R&D departments, group companies

Customers (OEM, Tier 1)

Identify needs
Accelerate proposal of solutions

Global bases
Europe: AMCEU, etc.
China: TARC, etc.
Americas: TAM, etc.
ASEAN: TITH, etc.

Toray Advanced Materials & Application (A&A) Center
Environment & Mobility Development Center (EMC)
Advanced Composites Center (ACC)

AMCEU: Toray Automotive Center Europe
TARC: Toray Advanced Materials Research Laboratories (China) Co., Ltd.
TAM: Toray Industries (America), Inc.
TITH: Toray International Trading Thailand Co., Ltd.

Interior molding materials
Combining Ultrasuede™ and TORAYPEF™ into a composite material improves moldability

Surface: Ultrasuede
Adhesive
Base material: TORAYPEF™

Next-generation radiator grill
Under development using metallic PICASUS™ in collaboration between Japan, Europe, and China sites with Covestro Japan Ltd. (with illumination and sensor transparency functions)

Door switch panel shape
Combining Ultrasuede™ and TORAYPEF™ into a composite material improves moldability

Proposal of comprehensive solutions across product categories
Comprehensive proposals for interior comfort needs
Interior materials, sound absorbing materials, temperature control films, optical fiber, HUD film, decorative films, and printing technology

Comprehensive proposals for new generation cockpits
Using surface materials, specialty inks, conductive materials, and elastic films, etc.
2. Refining Global Sales Operational Capabilities

The strength of the Toray Group’s sales lies in sales operational capabilities that meet the demands of customers and build a global value chain.

- Proposing solutions based on materials
- Creating new technologies through the pursuit of ultimate limits and technology integration
- Demonstrating the collective strengths of our R&D organizations
- Ensuring a stable supply of high-quality products
- Building a global value chain = Sales operational capabilities

Accelerating business expansion through direct marketing with customers making use of Toray Group trading companies

<table>
<thead>
<tr>
<th>Toray Group trading company(^1)</th>
<th>FY2022 revenue</th>
<th>Percentage of company-wide revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.05 trillion yen</td>
<td>Approx. 40%</td>
</tr>
</tbody>
</table>

1. Excluding intercompany sales

Developing the structures for local production for local consumption in each business to address geopolitical risks and fulfil supply responsibilities

Major group companies (as of March 31, 2023)

- **Fibers & Textiles**
  - China
    - TSD
    - TFNL
    - THK
    - TPN
  - ASEAN
    - ITS
    - CTX
    - TTS
    - TTP
    - PFR
    - PAB
  - Americas
    - TFA
    - TAMX
- **Resins**
  - TPCH
  - TPPH/Z
  - ITS
  - TTS
  - TBPR
  - TPM
  - TREC
  - TPA
  - TREU
  - TREU
  - TAK
  - TID

\(=\) Sales operational capabilities
2. Enriching and Extending the Value Chain

Reform the business model by enriching and extending the value chain leveraging collaboration with overseas sites, external resources, and digital transformation (DX). Maximize value provided to customers and expand quantity sold.

<Conceptual diagram: Enriching and extending the value chain>

Suppliers → Toray Group → External partners → End customers

Visualize and accelerate supply chain management using DX

Case 1: Material concierge service
Launch service in 2023 to solve customer issues

Toray

Concierge system
Vast amounts of material data + AI

Customer

- Enables optimal material selection with limited material knowledge
- Eliminates rework and reduces development time to 1/4 or less

Immediate optimum resins proposals

Direct input of desired physical properties

Case 2: Water treatment subscription service
Supporting operation and maintenance management using Toray's proprietary real-time monitoring system, TORAYWISE™

- Reducing burden on operation managers
- Ensuring stable facility operation

Operation behavior prediction
Trouble analysis

Customer facility
Toray

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Example: Apparel Business Cockpit System

Introduction of a cockpit system to centrally manage customer orders and data dispersed in various sites, such as fabric and garment production schedules. Visualize data, act quickly on abnormalities, and improve prediction accuracy.

- Integrated supply chain data platform
- Real-time monitoring, alerts, and analysis

Reduce lead times and improve flexibility throughout the supply chain.
Boost competitiveness and maximize profit of prepreg business by sharing and utilizing the resources of group companies in Europe.

Creating new UAM market demand

VOLOCOPTER

LILILUM

Needs

✓ Certification cost savings
✓ Molding support for mass production

Providing solutions

✓ Certified materials with a proven track record for aircraft application and stable supply
✓ Materials data and molding know-how built up in-house

1. Urban air mobility

Creating new UAM market demand

TAC: Toray Advanced Composites

Strengthening vertical collaboration in Europe

Carbon fiber

Intermediate materials

Molding/processing

Products

CFE

ZOLTEK

DELTA

CIT

TAC

Molder

R&D

OEM

R&D

Material sales

Material inquiries

Material sales

Product sales

RFQ

Advanced development

Development collaboration

Utilization

Joint development

EACC

AMCEU

VOLOCOPTER

LILILUM

TAC Europe Technical Center Local to Local Support
✓ TAC thermoplastic proposals for high-rate production)
3. Employing Strategic Pricing

Reflect the value created by the Toray Group appropriately in prices

<Conceptual diagram of pricing improvement>

(2) Raising prices by creating new value

Example of initiative for management of price differences between customers and between products
Identifying customers and products where product prices do not reflect the relevant costs, transaction volume and specification differences, and raising product prices

Examples of opportunities for improvement

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercising pricing power</td>
<td>Management of price differences between customers and between products</td>
</tr>
<tr>
<td>Profit management (management accounting)</td>
<td>General purpose product price control</td>
</tr>
<tr>
<td>Long tail user management</td>
<td>Quantification of risk of loss</td>
</tr>
</tbody>
</table>

Direct sales
Via trading companies

Visualize target customers
Negotiate to raise product prices

Area above standard price
Area below standard price
Improve the value of customers’ products, contribute to cost reductions, and reflect the value created appropriately in prices

Finer semiconductor circuit board wiring by reducing foreign particles on film, contribute to better performance, and pass through to sales prices

**Examples of cost pass-throughs**

- Reduce foreign particle A: +XX yen/㎡
- Reduce foreign particle B: + XX yen to XX yen
- Reduce foreign particle C: + XX yen/㎡
- Reduce fine scratches: +XX to XX yen/㎡

**Circuit board**

- Enlarged view of circuit
  - 1/3 size

**Between circuits**
4. Enhancing Brand Value

Win on brand, not just on product specifications and price, by leveraging the brand as a driving force throughout the organization

Case study: Brand strategy for Ultrasuede™, an ultra-microfiber nonwoven material with a suede texture

Clearly define the business vision and customer commitment and implement the business strategy with all relevant employees working together using the vision and commitment as a guide

Ultrasuede™ brand value (research by Interbrand)
FY 2017 ¥6.6 bil. → FY 2022 ¥34.2 bil. 5.2-fold increase

Vision

“To enrich society through empowered creativity and materials evolution”

The values we cherish

• A brand that represents Toray
• Leaving an enriched society for the next generation
• Connecting the world with Japan quality
• Infinite possibilities through technical innovation
• Enhancing value with customers

Initiative aimed at realizing approximately 100% plant-based raw materials in line with the vision

Major themes for future brand initiatives

<table>
<thead>
<tr>
<th>Business sector</th>
<th>Theme of initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance chemicals</td>
<td>Using TORELINA™ PPS resin to strengthen the brand in the resins business</td>
</tr>
<tr>
<td>Carbon fiber</td>
<td>Implementing a global brand strategy in the carbon fiber composite materials business</td>
</tr>
<tr>
<td>Environment and engineering</td>
<td>Enhancing business value by providing high performance membranes and water purification systems under the “TORAY” brand name</td>
</tr>
</tbody>
</table>
Improving Asset Efficiency
Efficient Management of Invested Capital

Identify growth potential/profitability (ROIC) in global, appropriate businesses (company, product, regional, application, etc.). Improve ROIC efficiently by investing management resources in growth business fields and maximizing profitability of existing tangible and intangible assets.

Four categories for growth potential and profitability:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Major strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) High-growth and high-profitability</td>
<td>Expand business by investing resources in growth business fields (SI and DI business), providing cross-organizational solution proposals, and accelerating external collaboration</td>
</tr>
<tr>
<td>(3) High-growth and low-profitability</td>
<td></td>
</tr>
<tr>
<td>(2) Low-growth and high-profitability</td>
<td>Increase value added through sales operational capabilities and combining diverse products, expand trade areas, and ensure loss management and improve costs</td>
</tr>
<tr>
<td>(4) Low-growth and low-profitability</td>
<td>Continue structural reform and consider withdrawing</td>
</tr>
</tbody>
</table>

Maximize profitability

- (1) High-growth and high-profitability businesses
- (2) Low-growth and high-profitability businesses
- (3) High-growth and low-profitability businesses
- (4) Low-growth and low-profitability businesses
Reducing Working Capital

Reducing working capital by advancing the level of supply chain management leveraging DX and through Cash Conversion Cycle Improvement (3C-i) activities

Advancement of supply chain management leveraging DX
Optimize inventories by improving the accuracy of production and sales plans and making decisions using statistical models and AI forecasts

AI
Statistical models
ICT
Simulation

Promoting DX with a focus on the frontlines

Sales forecast ➔ Supply-demand adjustment ➔ Production plan

Business unit-based management

Improving accuracy and make decisions

Inventory optimization ➔ Reducing working capital

Conceptual diagram of inventory optimization

Reduce excess inventory in each process

Raw material ➔ Process A ➔ Intermediate process ➔ Process B ➔ Product ➔ Raw material-product
AP-G 2025 Target
## Financial Targets for FY 2025

Achieving both business growth and greater profitability, while also improving asset efficiency

<table>
<thead>
<tr>
<th></th>
<th>FY 2022 result</th>
<th>AP-G 2025 FY 2025 target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>2,489.3</td>
<td>2,800</td>
</tr>
<tr>
<td><strong>Core operating income</strong></td>
<td>960</td>
<td>180</td>
</tr>
<tr>
<td><strong>Core operating margin</strong></td>
<td>3.9%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>ROIC</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2.7%</td>
<td>About 5%</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td>5.0%</td>
<td>About 8%</td>
</tr>
<tr>
<td><strong>Free cash flow</strong></td>
<td>237.3</td>
<td>Positive</td>
</tr>
<tr>
<td><strong>D/E ratio</strong></td>
<td>0.62</td>
<td>0.7 or lower (guideline)</td>
</tr>
</tbody>
</table>

1. Core operating income after tax / Invested capital (average of the balances at beginning and end of the fiscal year)

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### 1. Improving profitability
- Core operating income: 180 billion yen
  - Improve capacity utilization rate by expanding quantity sold with a focus on growth business fields and large-scale capital investment businesses
  - Raise prices and improve profitability by creating new value

### 2. Improving asset efficiency
- ROIC: 5%
  - Raise the level of supply chain management and reduce working capital by maintaining Cash Conversion Cycle Improvement (3C-i) activities
  - Continually implement reengineering with a focus on low-growth, low profitability businesses
## Main Strategies in Each Business

<table>
<thead>
<tr>
<th>Business Area</th>
<th>Main strategies / major capital investments</th>
<th>KPI (core operating income) (billion yen) FY2022 → FY2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibers &amp; Textiles</td>
<td>Developing environmentally friendly materials and rebuilding the recycling supply chain; expanding business and reaping the benefits of capital investment in growth fields such as ultra-microfiber nonwoven material with a suede texture and airbags; creating high added value with functional fibers; expanding Ultrasuede production facilities</td>
<td>51.2 → 64.0</td>
</tr>
<tr>
<td>Performance Chemicals</td>
<td>Resins &amp; Chemicals: Increasing market share in China and the automobile market; expanding PPS polymer production facilities; Films: Expanding business of films for electronic component manufacturing processes; expanding production facilities for PET films used in MLCC manufacturing processes and OPP films for automotive capacitors</td>
<td>30.4 → 91.0</td>
</tr>
<tr>
<td></td>
<td>Electronic &amp; Information Materials: Expanding business in OLED and semiconductor markets; expanding production facilities for electronic coating materials for OLED</td>
<td></td>
</tr>
<tr>
<td>Carbon Fiber Composite</td>
<td>Materials: Capturing market growth in both aviation and industrial/sports applications; expanding production facilities for industrial-use carbon fiber</td>
<td>15.9 → 36.0</td>
</tr>
<tr>
<td>Environment &amp; Engineering</td>
<td>Securing top market share for reverse osmosis (RO) membrane market and expanding peripheral businesses</td>
<td>19.7 → 27.0</td>
</tr>
<tr>
<td>Life Science</td>
<td>Strengthening the business foundation by pursuing business development outside Japan, expanding indications, improving existing products, and ensuring thorough cost reductions</td>
<td>0.2 → 2.0</td>
</tr>
<tr>
<td>Total (consolidated)</td>
<td></td>
<td>96.0 → 180.0</td>
</tr>
</tbody>
</table>
Variance Analysis of Core Operating Income (Business Growth Factors) Basis for FY2025 Core Operating Income Target

Full-scale recovery in capital investment due to recovery in aircraft applications in the carbon fiber business, as well as business expansion in automobile and semiconductor markets. Advancement of products with high value added in the Fibers & Textiles, Resins, Films, and Carbon Fiber Composite Materials businesses. Anticipated increase in fixed costs due to operation of new facilities and upfront expenses for environmental compliance.

<table>
<thead>
<tr>
<th>Variance factor</th>
<th>Difference (billion yen)</th>
<th>Business strategies for increasing income</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2022 result</td>
<td>Difference in quantity</td>
<td>Fibers &amp; Textiles: Increase quantity sold of ultra-microfiber nonwoven material with a suede texture and airbags, where capital investment has been completed, reflecting the recovery in automobile production volume</td>
</tr>
<tr>
<td></td>
<td>Net change in price</td>
<td>Resins &amp; Chemicals: [Resins] Boost compound production sites by expanding PPS polymer production facilities; increase quantity sold by capturing growth of the xEV market in China</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Films] Increase quantity sold by meeting higher requirement for release film for multi-layer ceramic capacitor (MLCC) and by capturing growth in mobile device and automotive markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Electronic &amp; Information Materials] Achieve full operation of facilities that have already been expanded in line with OLED market growth</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Carbon Fiber Composite Materials: Capture increasing demand in aircraft applications</td>
</tr>
</tbody>
</table>

- Net change in price: +20.0
- Difference in quantity: +64.0
- Total: +84.0
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