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# Environmental Strategy & Technology Development Strategy



Achieving business growth while mitigating environmental impact to become a leading environmental company

# Kazuhiro Ichikawa

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Technology Development Division
General Administrative Manager and CTO /
Global Environmental Strategy Promotion Office
General Administrative Manager

# **Environmental Strategy**

# **Accelerating the Circular Economy**

Epson has cited achieving sustainability in a circular economy as a priority (material) issue. Economic systems that continue to consume more resources and generate waste have dire consequences for the environment and society. Human society exists within the confines of Earth, a closed and finite space. To ensure the sustainability of society, we must transition to a circular economy. There are still some unknowns about the exact shape a circular economy will take and how to achieve it, but there is no doubt that decarbonization and closed resource loops will be essential components.

The major challenge we face on the road to achieving our environmental vision is to reduce our scope 3 emissions by, for example, sourcing raw materials with a lower environmental impact and encouraging users of our products to use renewable electricity. We cannot accomplish these alone. There needs to be a common commitment to accomplishing shared goals. So, in addition to adopting circular processes in our businesses, we are engaging our suppliers in actions to create an "Epson Green Supply Chain" and are reviewing economic models with various stakeholders through collaboration and open innovation in the supply chain. We aim to work jointly with others to come up with ideas for addressing a wide range of challenges.

#### **Environmental Vision 2050**

Epson will become carbon negative and underground resource¹ free by 2050 to achieve sustainability and enrich communities

#### Goals

- 2030: Reduce total emissions in line with the 1.5°C scenario<sup>2</sup>
- 2050: Carbon negative and underground resource<sup>1</sup> free

#### Actions

- Reduce the environmental impacts of products and services and in supply chains
- Achieve sustainability in a circular economy and advance the frontiers of industry through creative, open innovation
- Contribute to international environmental initiatives

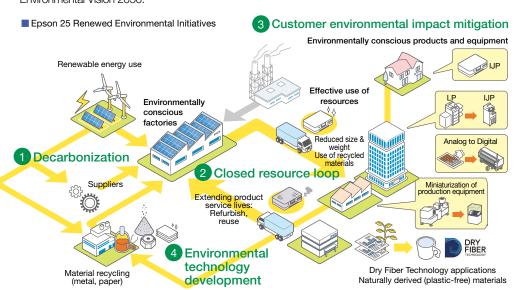
#### **Environmental Initiatives**

Our environmental initiatives are tied to the material issue of achieving sustainability in a circular economy. Epson is taking action to promote decarbonization, close resource loops, develop environmental technologies, and provide products and services that reduce environmental impacts.

It is essential to begin environmental initiatives immediately and to continue them over the long term. In addition to the initiatives under the Epson 25 Renewed corporate vision, Epson is pursuing environmental

initiatives on a much longer timeline in four areas to achieve the goals set forth in Environmental Vision 2050.

- →See P39 for examples of decarbonization.
- →See P40 for examples of closed resource loop and customer environmental impact mitigation.
- →See P44 for examples of our environmental technology development initiatives.









<sup>&</sup>lt;sup>1</sup> Non-renewable resources such as oil and metals

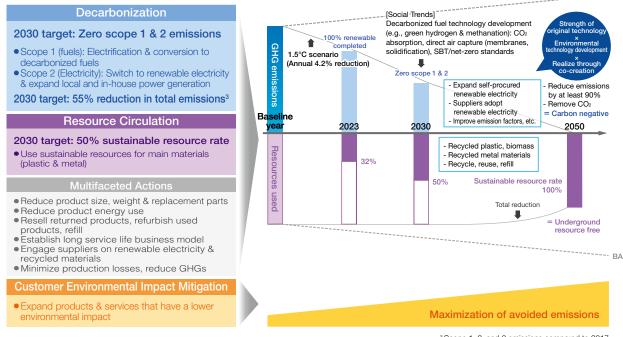
<sup>&</sup>lt;sup>2</sup> Target for reducing greenhouse gas emissions aligned with the criteria under the Science Based Targets initiative (SBTi)

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# **Environmental Vision 2050 Roadmap**

We are working toward our goals of becoming not just carbon neutral but carbon negative and underground resource free by 2050. Epson's Mid-Range Environmental Action Plan outlines specific scenarios for achieving these goals. Supply chain GHG emissions and resource use will increase as we expand our businesses in growth areas and new areas. So, each of our businesses established environmental value creation scenarios that align environmental strategy and business strategy. These scenarios will serve as a roadmap for achieving the goals set for 2050.

■ Main Strategic Actions in the Mid-Range Environmental Action Plan and the Roadmap



3 Scope 1, 2, and 3 emissions compared to 2017

# **Supplier Engagement Activities**

Epson's switch to renewable electricity, achieved in 2023, is a huge step forward. However, the majority of Epson's GHG emissions come from the supply chain, so we need to strengthen cooperation with our suppliers to promote broader decarbonization across society. Therefore, we launched an Epson Green Supply Chain project in 2024 to help our suppliers set decarbonization targets and adopt renewable electricity. Through these activities, we will increase the number of business partners who share our vision and engage the entire supply chain in environmental impact mitigation.

→ See P59 for Epson Green Supply Chain initiatives.





## Environmental Strategy & Technology Development Strategy

# **Declared Support for the TNFD**

In September 2023, Epson expressed its support for the public disclosure recommendations published by the Taskforce on Nature-related Financial Disclosures (TNFD) and registered as a "TNFD Adopter" (June 2024). We will continue to develop plans in accordance with the TNFD framework

and will disclose information from 2025. updating the content progressively.

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#### Partnership for Forest Conservation and Restoration

In March 2023, Epson launched a three-year international corporate partnership with the World Wide Fund for Nature (WWF), a global conservation organization, to support WWF's forest conservation and nature restoration activities at "deforestation fronts" worldwide. Epson shares WWF's vision of building a future in which people live in harmony with nature and contributes to its activities in regions such as Southeast Asia and South America.

Forest conservation projects supported by Epson in partnership with WWF



Reforests 70 hectares of degraded pastureland

Implements agroforestry practices on a 300-hectare cacao plantation

Reduces deforestation risks for companies sourcing agricultural and forestry products.

6 Brazil

6 Ghana

Japan

Decarbonization

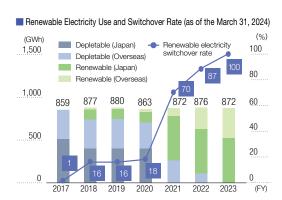
**Environmental Strategy & Technology Development Strategy** 

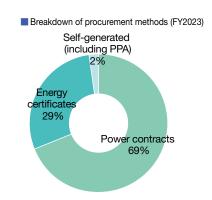
# 100% of the Electricity We Use is from Renewable Sources

Renewable electricity use is an important step toward achieving our decarbonization goal. We completed the switch to renewable electricity at our domestic sites in November 2021 and at our global Group sites<sup>4</sup> in December 2023. This has reduced the consumption of fossil fuels and will reduce our GHG emissions associated with electricity use to zero.

In 2017, when we started to transition to renewables, 70% of our Scope 1 and 2 emissions were from depletable energy sources. With Europe moving toward renewable electricity, we negotiated with office building owners for new power agreements. In Thailand, in addition to generating our own power with a rooftop mega-solar system, we switched to an agreement that uses power certificates from biomass (rice husk) power generation. Epson sites operating where power agreements are not available are using renewable energy certificates and other methods of procurement available in their country or region.

<sup>4</sup> Excluding some sales sites and leased properties where the amount of electricity consumed cannot be determined





## Planning for a Biomass Power Plant

Seiko Epson is planning the construction of the company's first biomass power plant, in Iida City, Nagano Prefecture. The plant is intended to provide Epson with self-generated renewable electricity on a continuous basis and reduce the ratio of electricity the company purchases from power companies. The electricity generated will be sold to the

market under a feed-in premium (FIP) scheme<sup>5</sup>. Power may also be supplied to community facilities in the event of a disaster. The plant will be fueled primarily by unused wood from nearby. By utilizing wood and bark from neglected forests, Epson will also be contributing to forest maintenance and to the local community.

<sup>&</sup>lt;sup>5</sup> In a FIP scheme, renewable electricity producers that sell electricity on a wholesale market, for example, receive a premium on top of the selling price.



Conceptual image

# **PICK UP**





https://corporate.epson/en/sustainability/ environment/decarbonization/transition100/

# Reuters Plus on 100% Renewable Electricity Use in Manufacturing

Many business leaders have pledged to achieve decarbonization targets based on the 2015 Paris Agreement goal of limiting the increase in global average temperature to 1.5°C above pre-industrial levels. To achieve this goal, GHG emissions must be reduced to virtually zero. Shifting to renewable electricity is an important step toward this. However, while companies have shown a clear commitment to renewable electricity, there are still significant obstacles in the way.

#### Challenges and Strategies for Transitioning to Renewables

At the 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC), more than 120 countries and regions endorsed the historic pledge to triple renewable electricity generation globally by 2030. This goal has been described as "ambitious yet achievable" by the International Energy Agency (IEA). Reaching this goal will require raising renewable electricity generation to at least 11,000 Gigawatts (GW) by 2030. This is 20% higher than the current forecast from Bloomberg NEF of 9,000 GW. According to the IEA, manufacturing and industry account for about one-third of global energy consumption, and electricity is the main source of energy<sup>6</sup>. If all the electricity consumed by factories and industrial plants could be supplied from renewable electricity, it would contribute significantly to combating climate change. In the pursuit of a renewable electricity future, one important strategy is to use local natural resources, such as solar and sustainable biomass, rather than imported energy resources.

#### The Path Forward for Manufacturing

Many manufacturers like Epson realize that indirect GHG emissions from their entire value chain (scope 3) are much greater than the GHG emissions from their own electricity use (scope 2). However, reducing their scope 2 emissions using renewable electricity—something they can do independently—is likely to have a far greater impact on society. Setting goals early and demonstrating a company's stance toward solving climate change is

the key to co-prosperity with suppliers and a sustainable society. Epson's groundbreaking commitment to 100% renewable electricity at its global sites is helping to increase demand for renewable electricity and expand generation capacity. Just as important, it provides a path forward for other companies.





Roundtable with experts

White paper







<sup>&</sup>lt;sup>6</sup> International Energy Agency (IEA): https://www.iea.org/energy-system/industry

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# **Closed Resource Loops**

# Initiatives to Become Underground Resource Free

The resources we use are called "natural capital" and include underground resources, abiotic flows<sup>7</sup>, and ecosystem capital. The mining of underground resources causes destruction of the biosphere. In addition, when mined resources are used as industrial products, they consume a great deal of energy and emit CO<sub>2</sub>. Epson will dramatically change the way it uses natural capital. We will endeavor to reduce total resource inputs, eliminate waste/disposal, and reach a 100% sustainable resource rate<sup>8</sup>. Ecosystem capital is renewable and non-depletable if used wisely. We will use previously mined underground resources to reduce consumption of new underground resources and become underground resource free by 2050.

<sup>7</sup> Renewable sources such as soler light, wind, water, geothermal heat <sup>8</sup> The proportion of sustainable resources (renewable resources + closed loop resources + less-depletable resources) to raw materials

#### Conceptual image of resource use for Epson to become underground resource free



# Reducing Waste by Recycling Cushioning Materials

Epson Service, which provides repair services for Epson brand products in Japan, has established a scheme to recycle and reuse cushioning materials that were previously disposed of as waste. Soft plastics such as bubble-wrap accounted for approximately 90% of the company's CO<sub>2</sub> emissions from waste. In this scheme, (1) packaging materials for incoming products are sorted and some are reused; (2) the bubble-wrap is compacted for efficient transportation and (3) delivered to the manufacturer as raw material; (4) recycled cushioning material is purchased and used when shipping repaired products back to customers. This will reduce CO<sub>2</sub> emissions by 3.9 tonnes per year and enable the continued use of bubble-wrap made from 80% or more sustainable resources (recycled material).



# **Customer Environmental Impact Mitigation**

Environmental Strategy & Technology

Development Strategy

# Estimating Avoided Emissions Based on Fairer Calculation Logic

Customer environmental impact mitigation is a part of Epson's growth strategy and a way to create value for society. As part of these efforts, we have been calculating and disclosing our avoided emissions<sup>9</sup>. However, with corporations increasingly expected to calculate their emissions based on recognized standards such as the guidance from the World Business Council for Sustainable Development (WBCSD), we decided to revise our calculation logic.

We started by calculating the avoided emissions of A3 color inkjet printers to accelerate the replacement of laser printers with inkjet printers, which is an important strategy in office and home printing. To ensure fairness, the calculations were based on WBCSD guidance and checked by a third party. It was shown that 15.1 kt-CO<sub>2</sub>e worth of emissions were avoided FY2023<sup>10</sup>. Epson's efficient, compact and precise technologies can help to mitigate environmental impact. By applying the calculation methodology formulated for A3 color inkjet printers to other product genres, we will visualize Epson's goal of mitigating the environmental impact of our customers.

# Recognized for Excellence in Energy Efficiency and Conservation

In contrast to multifunction laser printers, which consume considerable electricity because they use heat to fuse toner to the paper, Epson employs Heat-Free technology to eject ink. The LM series of linehead inkjet multifunction printers won the Agency for Natural Resources and Energy Commissioner's Award (Product Category & Business Model Category) under the fiscal 2023 Grand Prize for Excellence in Energy Efficiency and Conservation awards program. They were recognized for their reduced power consumption in sleep mode and during operation thanks to a new circuit unit.





WorkForce Enterprise LM-C6000/LM-C5000/LM-C4000







The proportion of sustainable resources (renewable resources + closed loop resources + less-depletable resources) to raw mater

<sup>&</sup>lt;sup>9</sup> A quantity that expresses the contribution by products and services to a reduction in society's GHG emissions

<sup>&</sup>lt;sup>10</sup> Based on the calculation method confirmed by Mizuho Research & Technologies, Ltd., the value is obtained by multiplying the difference between the weighted average of the publicly available lifetime CO<sub>2</sub> emissions of major laser printers in the global market and the lifetime CO<sub>2</sub> emissions of Epson's A3 color inkjet printer by the number of Epson A3 color inkjet printers sold in a given fiscal year.

# Environmental Strategy & Technology Development Strategy Reducing the Environmental Impact of Our Business Activities

Epson consumes resources and, in the process of conducting business activities across the life cycles of its products and services, emits GHGs and other emissions to the air, land, and water. We are working to assess the environmental impacts of our business activities across the value chain in an effort to reduce our impacts.

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In FY2023 we basically reached our reduction targets. Scope 3 emissions increased slightly compared to last year, and emissions intensity relative to business profit worsened in categories 1 and 11 due to a decrease in business profit. However, total emissions decreased by approximately 28% compared to fiscal 2017.



# **Achievements**

Scopes 1 & 2 GHG emissions

-80% 117 thousand t-CO<sub>2</sub>e

Target value: 391 thousand t-CO2e

Scope 3 GHG emissions (Per unit of business profit)

**-17**% **2**.80

Water use efficiency (water intake by revenue)

15% improved 6.2 thousand m³ per billion yen

Waste emissions

-5.6% 31.6 thousand t

Target: -34% by FY2025

Target: -44% by FY2025 Target value: 1.90

Target: Improve water use efficiency (water intake by revenue) by 1% from the reference value

Target value: 7.3 thousand m3 per billion yen

Target: previous year or less Target value: 33.2 thousand t

#### **Raising Environmental Awareness**

In FY2023, we conducted Irodori Report Training, a program for raising the environmental awareness of employees, to familiarize them with our environmental strategy and generate business ideas for solving environmental issues. The participants each researched an environmental issue, considered solutions, and presented a report to the Environmental Subcommittee. The reports were made available for viewing to get other employees thinking about the environment.

#### ■ Irodori Report Structure

Environment background & examples

Study an environmental issue, such as e-waste disposal and the popularization of biodegradable plastics

Ideas outlook and

Consider the potential for new business and what business or business model innovations would be needed to solve issues

#### ■Report Image



- 11 Calculated as the ratio of scope 3 (Categories 1 and 11) GHG emissions to business profit (Unit: thousand t-CO2e/100 million yen)
- 12 Based on the calculation method confirmed by Mizuho Research & Technologies, Ltd., the value is obtained by multiplying the difference between the weighted average of the publicly available lifetime CO2 emissions of major laser printers in the global market and the lifetime CO<sub>2</sub> emissions of Epson's A3 color inkjet printer by the number of Epson A3 color inkjet printers sold in a given fiscal year.







Responding to TCFD Recommendations





**Environmental Strategy & Technology Development Strategy** 

Climate change is greatly impacting society and Epson sees it as a significant societal problem. The goal of the Paris Agreement is to achieve decarbonization and limit the global average temperature to well below 2°C above pre-industrial levels and try to limit the temperature increase to 1.5°C. To achieve this, Epson is working to reduce total emissions in line with a 1.5°C scenario by 2030.

We analyzed scenarios based on the TCFD framework to quantitatively assess the financial impact of climate-related risks and opportunities on Epson's strategy. In a 1.5°C scenario in which there is rapid decarbonization of society, we found that there is transitional risk of an increase in operating costs due to market changes, policies, and legislation, but we expect to limit the financial impact by strengthening products and services based on inkjet technology and paper recycling technology. We found that the impact of physical risks on our domestic and overseas sites due to damage arising from weather extremes would be small. The table below shows the results of actions implemented in FY2023 with respect to risks and opportunities that could have a large to medium financial impact. Please click on the link above for details, including transitional risk and physical risk with a small financial impact.

#### Climate-Related Risks and Opportunities in a 1.5°C Scenario/ FY2023 Actions (Excerpt)

Cate	egory	Evaluated risks & opportunities	Actual- ization <sup>14</sup>	Business impacts			Financial impact	FY2023 actions	Results of actions implemented in FY2023
Transition risks	Market changes Policy & laws and regula- tions	(Initiatives in		Decarbonization of products, services, and supply chains as well as advanced initiatives in resource recycling are		Decarbonization     Renewable energy use - Energy-saving facilities & equipment - Greenhouse gas removal - Supplier engagement     Carbon-free logistics		- Completed switching 100% to renewable energy at all sites of the Epson Group globally <sup>15</sup> - Developed a roadmap for long-term stable procurement of renewable energy and a plan to construct a biomass power plant, our first such in-house plant (operation to begin in 2026).	¥4.79 billion (breakdown) -Investment: ¥1.54 billion -Expenses: ¥1.73 billion -Personnel expenses: ¥ 1.52 billion  Cumulative input costs and investments for Environmental Vision 2050: ¥12.64 billion in total
		Environmental Vision 2050) - Decarbonization - Closed resource loop - Environmental	Short-term	needed to respond to the shared global societal issues of climate change and resource depletion.  • Scientific and specific	Response to ri	● Closed resource loop - Use resources effectively - Minimize production losses - Extend product service lives	Invest a total of approxi- mately ¥100.0 billion by 2030	- Expanded the use of recycled plastic products, and increased the long-term use of products through refurbishing/reuse.  - Started construction of a new plant to recycle metal waste as materials for metal powder products (operation to begin in June 2025) (Epson Atmix).	
		technology development	5	solutions are necessary to develop environmental technologies linked with the rapid decrease of environmental impacts.	risks	● Environmental technology development - Dry fiber technology applications - Naturally derived (plastic-free) materials - Material recycling (metal, paper) - CO₂ absorption technology	Jy 2000	<ul> <li>Coordinated with external parties for the development of new technologies for fiber recycling by applying dry fiber technology. Strengthened a system for the development of cellulose composite bioplastics and promoted the development.</li> <li>Promoted the development of a technology for separating and collecting CO<sub>2</sub> using a separation membrane and a CO<sub>2</sub> absorption technology utilizing algae.</li> </ul>	
Opportunities	Products	(Initiatives in "Environment Vision 2050") - Customer environmental impact mitigation	Short-term	The need for environmentally considerate products and services will increase due to the introduction of a carbon tax, soaring electricity prices, rising waste disposal costs, sustainable production volume, and reduced resource use.	usiness	In the growth areas defined in Epson 25 Renewed, we expect to grow revenue at a CAGR (compound annual growth rate) of 15% by providing 1) inkjet office printing, commercial & industrial inkjet printing and printheads that reduce environmental impacts, increase work productivity, and reduce printing costs; and 2) production systems with expanded use of new production devices to reduce environmental impacts.	Large CAGR of 15% is expected in growth areas by FY2025	- Promoted initiatives in the growth areas (office printing, commercial & industrial printing, printhead sales, production systems) under "Epson 25 Renewed."	FY2020 →FY2023 Revenue CAGR +14.7% <sup>16</sup>
	and services	Environmental business	Short-term	Market growth is expected in the areas of global warming prevention, waste treatment, and effective utilization of resources.      The shift to a circular economy is expected to drive market growth for recycled plastics, high-performance biomaterials, biologistics and metal recycling.	Business opportunities	Generate revenue by value transformation (enhancing functionality), eliminating plastics (packing and molding materials), creating new high-value-added materials and carrying out other measures through the establishment of technologies, such as applications of dry fiber technology, including paper recycling, development of naturally derived materials (elimination of plastics) and recycling of raw materials (metal and paper recycling) as effective solutions for combatting global warming and shifting to a circular economy.	Meduim	- Started verification of a business model for fiber recycling with an eye to business development with dry fiber technology as the core technology.	-

<sup>16</sup> Comparison of actual results for FY2022 to FY2023 forecasts at the time of announcement of Epson 25 Renewed.





<sup>13</sup> Financial Impact Small: < 1 billion yen Medium: 1-10 billion yen Large: >10 billion yen Short term: < 10 years Medium term: 10-50 years Long term: > 50 years 15 Excluding some rental properties housing sales sites.



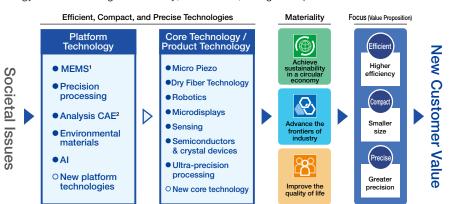
# **Technology Development Strategy**

# **Developing Technology to Solve Societal Issues**

Epson has identified four material issues that it should address to help solve societal issues and advance toward its aspirational goal of achieving sustainability and enriching communities. The Technology Development Division is focusing on three of them: achieving sustainability in a circular economy, advancing the frontiers of industry, and improving the quality of life.

Epson has always provided value by examining ways it can leverage its philosophy of efficient, compact, and precise innovation to benefit society. Our efficient, compact, and precise technologies are the source of our competitiveness. They include such core technologies and product technologies as Micro Piezo inkjet printheads, Dry Fiber Technology, robotics, microdisplays, sensors, semiconductors, crystal devices, and ultra-precision processing. These were derived from platform technology such as MEMS<sup>1</sup>, precision processing, analysis CAE<sup>2</sup>, environmental materials, and Al. In addition to these, we are also working to establish new technologies.

Epson will create new customer value by continuing to develop and refine technology that leads to higher efficiency, smaller size, and greater precision.



# Front-Loading Technology Development: The Commercialization Process

We focus on developing the technology we need to realize the goals of three material issues. We assess the situation, identify obstacles that must be cleared for a plan to succeed, then prepare multiple scenarios to get us to the goal. We examine the situation from a customer, technology, and business viability standpoint to identify obstacles. We then consider what makes them obstacles and think of ways to clear them as we develop an overall picture of the product commercialization process. Imagining multiple scenarios simultaneously provides a shortcut to commercialization. The scenario that is most likely to yield the greatest benefits if development succeeds is considered Plan A and is given the highest priority. Plans B and C are scenarios that will yield inferior results in terms of quality,

cost, or delivery but have lower hurdles to clear and can achieve the main objective. The Technology Development Division consciously practices this front-loaded approach to Advance **Achieve** development and focuses on ensuring the frontiers sustainability Achieving of industry in a circular that the technologies we develop sustainability economy and enriching are reliably commercialized and 2050 communities turned into business opportunities. Environmental (our aspirational goal) Vision 2050 2030 **SDGs** 2025 Corporate Vision Epson 25 Improve the (2) Situation quality of life assessment Customer Business (1) Envisage a goal to which to aspire. viability (2) Analyze the aspirational goal from a customer, technology, Efficient, compact, and and business viability standpoint to identify obstacles. Technology (3) Draw up and rapidly execute scenarios to remove obstacles.

# **Accelerating Technology Development**

The Technology Development Division is currently focusing on developing environmental technologies for closing resource loops and on developing production technologies for eco-conscious manufacturing. To achieve these goals, we are expanding the use of digital technologies such as AI, including for product manufacturing processes, and creating new value with partners who share the same goals.



See the back cover for footnote 1 & 2





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Bioplastics

# **Key Word: Environment**

**Environmental Technology Development for Resource Circulation** & Production Technology Development for Eco-conscious Manufacturing

Epson seeks to achieve sustainability in a circular economy. Toward this end, the Technology Development Division is developing environmental technology, including Dry Fiber Technology and metal powder manufacturing technology. It is also helping to make manufacturing processes more efficient by introducing mold technology and development

technologies such as 3D printers. In addition, by developing technologies that combine unique technologies such as inkjet and robotics, we are realizing eco-conscious manufacturing to advance the frontiers of industry.



Environmental technology development (Also learn about our CO2 absorption technology. which is not covered here.)

Lumber

https://corporate.epson/en/sustainability/ environment/development.html

#### Development Examples

1 Development of closed-loop materials We are applying Dry Fiber Technology to the development of biomass plastics through

participation in the Cross-ministerial Strategic Innovation Promotion Program and the Pararesin Japan Consortium<sup>3</sup>.

→See P46 for SIP initiatives.



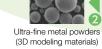


▶ See the back cover for footnote <sup>3</sup>

# Metal powder manufacturing technology

Metal powders are manufactured using Epson Atmix's fine metal powder manufacturing technology.







# Reusable metals

# **Dry Fiber Technology**

This proprietary Epson technology can realize high-performance materials by defibrating paper as well as a wide variety of other fibrous materials as needed for a given application, binding the fibers with functional materials, and forming them into the desired shape.



#### Environmental Strategy & Technology Development Strategy

## **Development Examples**

#### On-demand mold services

Increase parts prototyping and manufacturing efficiency with a combination of unique specialty mold materials and mold manufacturing technology that enable the delivery of molds in as little as four days.

#### 4 3D printers that innovate manufacturing

We will increase development and prototyping efficiency with 3D printers that can produce objects using a wide range of materials, from general-purpose plastics to engineering plastics and metals.



# 6 Micro injection molding machines

Epson's proprietary disk drive system saves space, saves energy, and provides high-efficiency precision injection molding.

## 6 3D object printing

High-speed inkjet printing and precision robots can be combined to print on 3D objects.

# Manufacturing DX

We are developing an integrated manufacturing management system to drive digital transformation (DX) in manufacturing. The goal is to revolutionize the production process to increase production stability, quality, and efficiency by controlling processes and managing equipment that are connected via a common technology standard.







# **Key Word: Digital Transformation (DX)**

ΑI

# Strengthening & Streamlining Technology Development with MI & PI

Environmental Strategy & Technology Development Strategy

We are also introducing AI in technology development to strengthen and streamline our technology development capabilities. Specifically, we aim to front-load technology development through a data-driven approach by applying material informatics (MI) and process informatics (PI)<sup>4</sup>. In MI (Materials Informatics), machine learning (AI) is used to create models from existing data to predict new material properties, thereby shortening the material development period. Similarly, AI is applied to product processing to rapidly stabilize product quality and improve product performance, supporting the realization of front-loading in development.



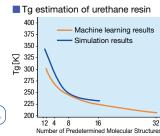
# Usage Examples

# 1 Exploration of New Materials: Data Extraction and Analysis Using Substitute Technical Paper Data

When there is limited internal knowledge data obtained from experiments with new materials, we utilize technical papers from research institutions as a data source. When exploring for materials, we build a library from the data of papers and derive the desired material composition through the analysis.

# 2 Construction of a General-Purpose Model: Rapid Estimation of Polymer Properties

Data is generated from the chemical structural formulas of polymers, and a learning model is created to estimate the glass transition temperature (Tg)<sup>5</sup> based on the functional groups and bonds of the polymers. Compared to conventional experiments and simulations, urethane resins can be predicted with the same accuracy in a very short time.



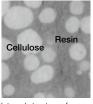
# **Future Steps**

# Utilizing Next-Generation Synchrotron Radiation to Enhance Analytical Capabilities

To improve MI and PI usage accuracy, we are also working to strengthen analysis capabilities of actual products (product materials). Epson and Tohoku University are collaborating on innovative research and development that will lead to the development of low-cost, high-strength recycled plastics. In the future, we will observe the inside of the materials to be developed using synchrotron radiation, which can visualize the world at the nanometer level, and utilize the analysis results for material development and to improve simulation accuracy, leading to the development of materials suitable for industrial use such as automobile parts.



NanoTerasu makes it possible to analyze materials in detail

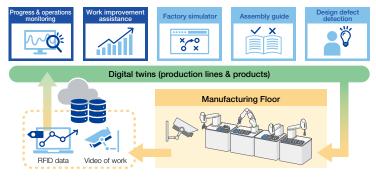


Internal structure of bioplastic material

# CAE

# **Enhancing Manufacturing Through DX**

Within our DX program, we are looking to strengthen manufacturing by using digital twins, data-driven virtual models of physical objects that perform accurate simulations. For example, in upstream processes such as development and design, we use computer-aided engineering (CAE) to simulate new product manufacturing lines and component processing conditions in advance, then incorporate the results in product design to solve problems before creating prototypes.

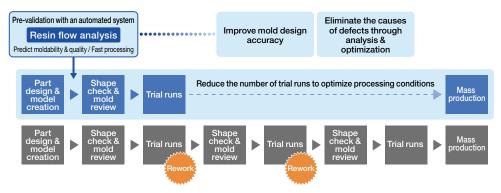


#### **Usage Examples**

#### Automatic Resin Flow Analysis System for the Injection Molding Process

Epson produces a wide variety of parts by injection molding. In parts production, molding conditions must be optimized through repeated trial and error before actual mass production begins, and the number of trial runs must be reduced to eliminate rework. In response, we developed an automated resin flow analysis system that can quickly derive optimal molding conditions, significantly reducing the number of trial runs required to optimize processing conditions. As a result, the time required to mass-produce new products has been shortened substantially, leading to a reduction in support man-hours for overseas production sites.

In addition, engineers with CAE skills in the Technology Development Division and production engineers in each business work together to front-load development of new products.





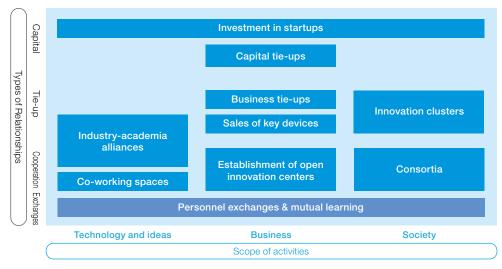
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# **Key Word: Co-creation**

#### Leveraging Efficient, Compact and Precise Technologies to Accelerate Commercialization in Collaboration with Partners

Co-creation is also an important initiative in technology development. If we consider business only in the context of our own technology, we will end up confining ourselves to a narrow area and limiting our speed. Epson does not have everything that is required to solve societal issues. The idea of Epson 25 Renewed is to create new value with partners who understand and share our desire to solve societal issues. Epson has been engaged in various forms of co-creation to solve societal issues. The scope of these activities is expanding beyond our technology, ideas, and business to include impacts on and contributions to society. We are collaborating with allies in industry and academia to improve our technological capabilities and develop new technologies and ideas. Co-working spaces are being used to incubate fresh ideas and to encourage wide use of our technologies and ideas by our partners.

#### Epson's Co-creation Initiatives



Epson's technology development activities include research and development, product development, and production engineering. We take a bird's-eye view of the entire value chain and co-create with partners as needed to achieve goals and resolve issues. As an example, we are participating in the Cross-ministerial Strategic Innovation Promotion Program (SIP)<sup>6</sup> to develop applications for Dry Fiber Technology, co-creating with Tohoku University in research and development, and co-creating with The Hong Kong Research Institute of Textiles and Apparel Limited (HKRITA) in product development.

#### Environmental Strategy & Technology Development Strategy

# **Co-creation Examples**

#### Participation in SIP

The development of composite plastics using defibrated cellulose was selected for the third phase of the Cabinet Office's Cross-ministerial Strategic Innovation Promotion Program (SIP)6.



6 SIP is a national project aimed at achieving scientific and technological innovation. Directed by the Cabinet Office's Council for Science, Technology, and Innovation, it transcends ministry boundaries and traditional fields.

# Co-creation with Tohoku University: Accelerating the Social Implementation of Composite Plastics That Will Drive the Circular Economy

Bioplastics and recycled plastics are increasingly being used to establish a circular economy, but their mechanical strength and durability are lower than virgin plastics, so their range of use is limited. Epson has been collaborating with Tohoku University under a comprehensive partnership agreement since 2006, engaging in systematic research and development as well as talent cultivation through industry-academia cooperation. In August 2023, the Sustainable Materials Co-Creation Research Institute was established to accelerate research and development, as well as social implementation, of base technologies for cellulose fiber-reinforced bioplastics and recycled plastics.



#### **Tohoku University**

Seiko Epson Corp. x Tohoku Univ. Co-creation Research Center for Sustainable Materials



Material Solutions Center that houses the joint research lab (Tohoku University Katahira Campus)

#### Co-creation with HKRITA: Circulating Resources by Recycling Clothing Fibers

We are evolving Dry Fiber Technology and expanding its use in-house to create sound-absorbing and cushioning materials for equipment from used paper. We have also developed new internal applications for cotton mill ends from clothing factories. In addition, we are looking to establish technology for defibrating elastic blended fabrics and tight weave fabrics, making it possible to separate fibers from challenging textiles such as functional clothing, sheets, and dress shirts, as well as from factory mill ends, unsold items of clothing, and unwanted apparel. We are engaged in joint development of recycled yarn with The Hong Kong Research Institute of Textiles and Apparel Limited (HKRITA).



Paper cushioning material manufactured using Dry Fiber Technology (white objects)



Watch product packaging made from cotton mill ends



Recycled cotton yarn (prototype production) made of 50% fibers defibrated using Dry Fiber Technology







Introduction

# Intellectual Property Strategy



Epson believes it is important to help sustain growth in corporate value by converting intellectual property—broadly encompassing brands, data, and other assets as well as intellectual property rights—into value.

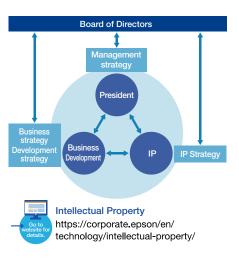
The Intellectual Property Division works closely with management, the operations divisions, and development and strategy departments, converts IP into value by proactively utilizing all IP, and enhances Epson's value and supports sustainable growth through these activities.

For example, one source of Epson's competitive advantage is our ultra-precision processing technology. Not only are our Micro Piezo printheads being refined using this technology, they have also advanced under the protection of our strong IP. We invested heavily in the mass production of these printheads, which we used to expand our product lineup, thereby contributing to further growth of our printing businesses. Our printhead sales business has increased the user base in various commercial and industrial sectors and has led to the expansion of the digital printing market. The growth in these businesses is also proceeding on the basis of our strong IP. By investing in startups and co-creation, we have developed new markets with high potential, and the support received from the perspective of IP is accelerating such efforts. Our IP thus serves as a foundation for realizing a virtuous cycle in business, enabling even greater investment in R&D and the evolution of our printheads and other products as well as our technologies so that we can continuously boost their competitive advantage.

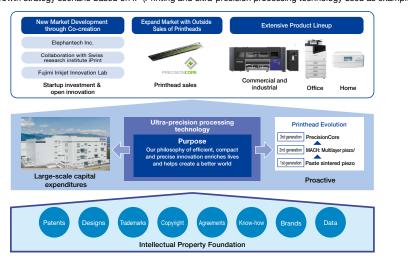
In other words, it is the IP we create that supports this growth strategy scenario.

# **Epson's Intellectual Property Strategy Management Organization**

We align our IP strategies with our development and business strategies to protect our core technologies and brands. Strategies are formulated during two-party discussions between the head of the IP division and the head of each operations division and the head of the Technology Development Division or, when necessary, during three-party discussions that further include the president. IP strategy is regularly reported, discussed, and shaped at board meetings. At its most recent meeting, the board reaffirmed the direction of IP activities designed to support the creation of new businesses.



■ Growth strategy scenario based on IP (Printing and ultra-precision processing technology used as examples)



Of course, our efforts are not limited to the printing sector. For promising future development projects, we formulate strategies to protect our IP and to generate new innovations. One example is our IP activities to protect and enhance the value of Dry Fiber Technology, which has business potential and can help us achieve Environmental Vision 2050.







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# Supporting Innovation Through IP Landscapes

Epson supports innovation from an IP perspective by using IP landscapes in conjunction with investments in startups and co-creation with third parties through open innovation. For example, we assess the value of intellectual property held by startups when deciding whether to invest in them. In the case of open innovation, we use IP landscapes to capture a bird's-eye view of the state of development and IP acquired in a particular field and to evaluate the future potential of the technology. We also provide innovation support to tie development projects to business growth strategies. This support includes proposals, made from an IP perspective and based on analysis utilizing IP landscapes, for expanding the scope of application of the development projects and strengthening base technologies. For commercialized development projects, the Intellectual Property Division meets with development departments/operations divisions to review evaluations of quantitative and qualitative competitive advantage based on IP landscapes. We follow that up by formulating and executing IP strategies that stipulate the protection of IP and its proactive use. Intellectual property at this stage includes designs, trademarks and brands as well as patents.

Epson is thus providing support by executing a tactical IP strategy based on all types of IP to accelerate the growth of its businesses through innovation arising from development projects.

# **Intellectual Property Activities for Innovation**

Epson has defined five levels in the value hierarchy of IP activities. Our IP strategy is geared toward achieving Level 5, where IP activity accelerates innovation, creates the future, and enhances brand identity. We believe that strong support for innovation through the protection and proactive use of IP based on this strategy will enhance Epson's brand identity and improve corporate value. In April 2024, to accelerate to Level 5 in the value hierarchy, the Intellectual Property Division launched a new organization that consolidates multiple functions into a single entity. They include

the functions that support innovation through the use of IP landscapes, review contracts to lead innovation to success, and manage trademarks to enhance brand identity. We will strongly support innovation by strategically implementing IP strategies in an integrated fashion to achieve Level 5 under the new organizational structure.



# **PICK UP**

Intellectual Property Strategy

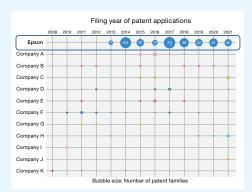
# Intellectual Property Activities Supporting Dry Fiber Technology

Dry Fiber Technology¹ has a competitive advantage from an IP perspective. We have been strategically filing patent applications in the field since we began developing the technology and now own a patent portfolio that is far superior to that of our competitors.

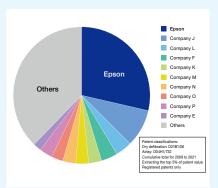
We focus not only on the quantity of patent applications but also on their quality (i.e., the potential value of inventions) and rank No.1 in terms of the value of the patent family in an indicator of competitive impact.

<sup>1</sup> This proprietary Epson technology can realize high-performance materials by defibrating paper as well as a wide variety of other fibrous materials as needed for a given application, binding the fibers with functional materials, and forming them into the desired shape.

Number of patent applications filed by year in the Dry Fiber Technology field<sup>2</sup>



Ownership ratio of the top 5% of patent families in the Dry Fiber Technology field in terms of Competitive Impact<sup>2</sup>



<sup>2</sup> Created by Epson using LexisNexis PatentSight.

The invention of a double-stage sieving (Patent No. 6127882), a core technology in this patent portfolio, received the Asahi Shimbun Prize at the 2019 National Commendation for Invention. This is a clear indication that Dry Fiber Technology is recognized as a valuable technology that is contributing significantly to the promotion of science and technology and the development of the industrial economy. We are also exploring development projects, using IP landscapes to accelerate business growth through new innovations that expand Dry Fiber

Technology applications.

We are branding Dry Fiber Technology by acquiring trademark rights and displaying the trademark in a variety of situations to increase recognition of the technical name and its value.









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DX Strategy



DX is a crucial strategy for achieving our goals. The DX Division is responsible for driving DX. To accelerate the evolution of business models in each business segment through the power of digital technology, the DX Division will create new value by building robust digital platforms and connecting Epson with customers and business partners through hardware products that are used around the world. These will be coordinated with enterprise resource planning (ERP) and other core systems to streamline operations globally. In other words, our goal is to use data to create value and improve business performance.

We are approaching DX from two angles: from a customer's perspective and from an employee's perspective. We are working to provide solutions that are attentive to customer needs and are acting to change the way employees work.

C	Χ	DX Level 0		DX Level 1		DX Level 2
Custor Experie		Enhance existing customer value		Contribute to custom success with new serv		Create new customer success leading to solving societal issues
Custome	ve	Digitalization of existing businesses Improve the system, enhance efficiency, and apply automati	е	Transform existing business models Tie together Epson hardware and expand multi-tiered earning		Creation of new business models Cooperate with partners and create new business models
Corporate Transformation	Corporate Increase operational Transformation efficiency & productivity		A	Advance operational output		Realize latitude in work arrangements
Employee Perspective	Impr	Digitization of pusiness processes ove the system, enhance ncy, and apply automation	Improve	Digitalization of thought processes speed and acceracy of analysis and , reform the value creation processes		IT for new work arrangements rse work arrangements not imited by place or time

# DX under Epson 25 Renewed

To achieve the goals of Epson 25 Renewed, we are building a digital platform in four separate areas that support DX from a customer's perspective and from an employee's perspective.

#### **Business Creation**

By co-creating solutions utilizing data with partners broadly, create new business models

#### DX area

Connect customers and products, and create a digital platform that helps to solve societal issues

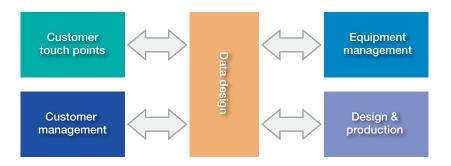
#### IT area

Construct IT platform to assure and support Epson's global activities

#### Global Business Infrastructure Innovation Project

Connect DX platforms and IT platforms, and establish a digital foundation to support Epson's trust-based management

The DX platform consists of five digital platforms that support the creation of new value connecting customers and Epson: customer touch points, customer management, machine management, design and manufacturing, and data utilization.



Provide infrastructure at customer touch points to connect directly with customers and deliver information they need. And, in addition to website management and solution provision, help to provide and improve the customer behavior analysis environment. Strengthen customer relationship management and contribute to business success. In machine management, we are linking customers' hardware and data to provide value tailored to their preferences and business. Digitalize design and manufacturing operations by connecting data from tools and applications in design, trial production, mass production preparation, and manufacturing to transform the traditional engineering chain into a value creation process. In addition to utilizing the data of each platform, combine that data to create new value.







DX Strategy

# **Examples of Strategic DX Activities**

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# Customer Perspective DX Level 1 Remote Service and Support

Epson Cloud Solution PORT, a solution for remote and distributed printing, enables us to offer our customers increased operational efficiency and productivity as well as reduced downtime through faster service and support from us and our partners. Epson Projector Management Connected (EPMC) has also improved service and support for projectors.

We aim to improve the customer experience by helping customers best use their products and to work with even more customers to expand the scope of data use and create new value.



# Employee Perspective DX Level 0 & 1 Global Business Infrastructure Innovation Project

To accelerate digital transformation, we are standardizing IT systems across the Group to enhance management decision-making support, strengthen governance, and free the Group from low productivity and long working hours. Specifically, we are revising business processes and standards data, building a globally integrated database, and updating ERP, CRM¹, and S&OP² systems. With these actions and through control from the Head Office, we will strengthen global operations.



#### 1 CRM: Customer relationship management

# Customer Perspective DX Level 2 Creating New Business by Applying Core Technologies

To solve societal issues, we are developing a business model to provide support and guidance by converting corporate data from solutions and human data from sensing devices into different value. In addition to developing services with our own solutions, we will build a business model for data sales. For SMEs, we are exploring a new service through a tax accounting firm that combines Epson's accounting data with partners in public institutions and financial infrastructure and services.



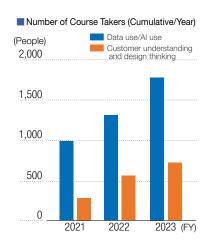
To solve health and exercise issues, we will utilize a guidance/support platform that converts customer motion, position, and vital sensing data into value, develop business in health guidance and sports performance support, and create a business selling data to partners.



# **Human Resource Development**

In-house education programs emphasize the two skills required for DX: digital technology (D) and transformational skills (X).

For digital technology, we offer courses on data and AI utilization to all employees to improve their skills. In addition to lectures on customer understanding and design thinking, we are developing people with a broad perspective through practical opportunities such as idea-thons with students from universities and vocational schools and professionals from different industries. Experience is also gained while working on new business with various partners.







<sup>&</sup>lt;sup>2</sup> S&OP: Sales and Operations Planning

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# **Human Resources Strategy**



Epson strives to increase long-term corporate value and sustain growth by solving societal issues through business operations that are aligned with our stated corporate purpose. To do so, we must expand and create businesses by environmental, digital transformation, and co-creation initiatives that are aligned with the role, strategies, and policies in each area of business set forth in the Epson 25 Renewed corporate vision. Underpinning these activities are initiatives to strengthen our business infrastructure through HR strategies. Epson is executing strategies that pivot around allocating human resources to priority areas, strengthening human resource development, and revitalizing the organization. We seek to develop human resources who think and act autonomously and enable them to come up with ideas for services that will be sought as society changes and for solutions to societal issues.

# **Basic Human Resources Strategy**

Epson was born and raised in Shinshu (Nagano Prefecture, Japan). Our core business functions and facilities are still here, but we now also have R&D, production, and sales sites in 107 locations around the world. Roughly 80% of our revenue and 75% of our workforce are outside Japan. The keys to our human resources strategy are diversity and people who enable us to come out ahead in intense global competition and achieve our business goals and business growth. That is why we want to make the hiring and relatively long retention of locals a strength and why we are actively recruiting outside talent.

Specific points in our human resources strategy are summarized in the table on the right.

# Strategy 1 Allocate human resources to priority areas

Drive business transformation and innovation to enable us to accurately understand customer needs and respond quickly and flexibly to them. To this end, recruit managers and specialists in new and growth areas and in specialized fields. Train internal personnel for new and specialist jobs and assign them to priority areas so that we are well-positioned globally.

# Strategy 2 Strengthen human resource development

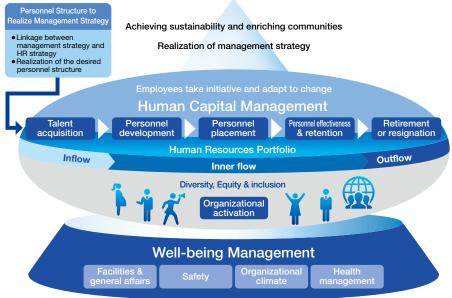
Encourage employees to grow and develop their careers. Provide them with challenges and opportunities through training programs, reskilling, job rotation, and an internal job posting system to help enable them to adapt to change. Put us in the best position globally by developing our worldwide human resources and assigning them to positions that allow them to shine.

# Strategy 3 Organizational activation

Heighten creativity and innovation by capitalizing on diverse talent, including women, people of different nationalities, people recruited from outside Epson, people with disabilities, and seniors. Enhance employee engagement, maximize the collective strength of organizations, and continue to create value by making a worker-friendly environment, one that takes advantage of being away from a major metropolis and closer to nature and home.

#### Overview of Epson's Human Resources Strategy and Initiatives

Epson's corporate activities are supported by initiatives to strengthen its core business infrastructure through human resource strategies. Epson is executing strategies that pivot around human capital management and health and productivity management. These strategies seek to develop human resources who think and act autonomously and create an environment where they can capitalize on their abilities to come up with ideas for services that will be sought as society changes and for providing solutions to societal issues.







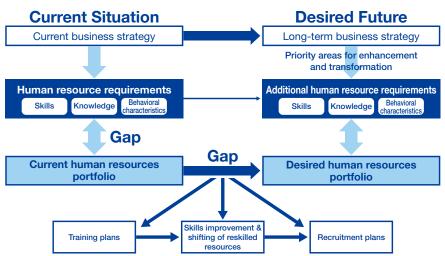
# Type of Talent We Look for

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To execute our business strategies and achieve our plans, we need individuals who have a broad perspective, professional expertise, and the ability to quickly adapt to change. We need people with a customer perspective who can take initiative and autonomously create customer value. At the same time, we need to embed purpose and the Epson Way and embrace shared strategies and goals.

We are developing a global HR portfolio to compensate for Japan's declining birthrate and shrinking labor pool. In FY2023, we visualized the current portfolio for a specific business by defining the requirements—the skills and behavioral characteristics—needed to formulate and execute business strategies and establish new business models. The next step will be to visualize the portfolio for the entire company. We will picture the HR requirements as we develop the next corporate vision and identify the gap between the current situation and desired future, both quantitatively and qualitatively. This will allow us to hire, reskill, and optimally allocate personnel as needed to realize our business strategies.

#### ■ Visualizing a Human Resources Portfolio



We formulate a human resource portfolio that shows the current [As is] and desired [To be] states of our human resources. We use it to identify gaps in the quality and quantity of human resources required to formulate and execute business strategies and establish new business models, primarily from the perspective of skills and behavioral characteristics. We refer to personnel skill level maps to determine whether the necessary people can be secured by upskilling, reskilling, or reassigning existing personnel or whether we need to acquire external talent.

We also use the human resource portfolio as a communication tool between supervisors and subordinates to encourage their independent learning and growth.

# Human Resources Strategy

# Strategy 1

# Allocate Human Resources to Priority Areas

Formulate staffing plans based on forecasts of the future personnel structure and the talent required to achieve our business strategies. In the medium term, hire 350 or more new graduates and mid-career workers each year.

We are strategically allocating personnel to growth areas such as printing (office, commercial and industrial) and production systems (robotics), as well as to new areas such as environmental business, environmental technology, and sensing.

In addition, we are educating employees to enhance their expertise in these priority areas while also recruiting outside management personnel and specialists for the priority areas.

#### Talent Placement and Promotion to Management

Talent placement and promotion to management are based on the concept of "role." We design global organizations to execute business strategies, define the role of each position in the organization, and then allocate and appoint the most appropriate people to that role. To achieve this, we conduct an annual human resources review at each level of the organization to get a bird's eye view of the staffing situation, list potential successors for each position, and review their skill development needs.

Internationally, local top management and human resource departments work together to define roles and requirements and formulate succession plans and development plans. These actions are designed to optimally position human resources from a global perspective.

#### Number Hired

	FY2021	FY2022	FY2023	Future Goals	
New graduates	200	250	344	- Hire ≥350/year¹ continuously	
Midcareer hires	48	241	204		

<sup>&</sup>lt;sup>1</sup> Total hires each fiscal year, including new graduates who join on April 1 and mid-career hires

#### ■ Allocation of Personnel to Priority Areas

	FY2021-2023 Total	FY2024 Plan
Total staffing	1,881	503
Number assigned to priority areas	1,313	374

<sup>\*</sup> Number of employees assigned due to hiring and internal transfers







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# Strategy 2

# Strengthen Human Resource Development

We want Epson to be a place where people can take the initiative to develop their careers and continue to grow long-term. Better enabling employees to adapt to change will enable us to achieve our business objectives, support the company's development, and ultimately contribute to achieving sustainability and enriching communities. We are reevaluating our education and training programs from this perspective and, based on feedback from employees and different business units, we have initiated three new initiatives.

# (1) Support for the self-formation of a lifelong career

Support for an environment where all employees from the young to the elderly can continue to think about how to live

## (2) Support for upskilling of management

Improvement in skills for interaction by superiors with their subordinates and abilities to solve problems on-site

#### (3) Support for reskilling

Education and training support for the mobility of diverse human resources

#### Specific Actions

#### (1) Support for the Self-formation of a Lifelong Career

Epson continuously implements initiatives aimed at being an organization that promotes personnel development. We provide support toward building motivating and challenging careers that encourage growth. We offer Lifetime Career Support Training (LTCS) courses to encourage employees to think about the career they want to pursue and take the steps necessary to do so. The courses are tailored to employees of different ages and echelons. There is an entry-level course for new-hires as well as courses for employees in their 30s, 40s, and 50s. There is even a course titled LTCS50up, which was created with a view to rehiring employees up to age 70. By providing employees with an opportunity to continue thinking about their careers at each age milestone, we help them to overcome various career challenges and to shape their own careers.

#### (2) Support for Upskilling by Management

Management and communication by superiors in the workplace play an extremely important role for employees to work and grow dynamically. Questionnaires have made it clear that many managers, especially those with little experience, are concerned about this point.

Accordingly, we have newly introduced 1-on-1 communication training. Moreover, in addition to existing new section manager training, we have launched follow-up training after employees are promoted to section manager. That means we have set up opportunities for section managers to share information and to think and learn from each other. We also partner with outsiders to provide materials for learning management skills.

#### (3) Support for Reskilling

To support employees' desire to build their careers and continuously grow, as well as to improve their skills and ability to respond to changes, we have been creating a reskilling program that is designed with the following three main objectives: (i) raise the level of all employees by helping them obtain the minimum digital knowledge and use it in their own work, (ii) provide an opportunity for re-learning knowledge specific to a product or business and for education in specialized fields such as digital transformation to accelerate personnel assignment and rotation to priority areas and new areas, and (iii) establish an environment that provides opportunities for learning and improving skills to accommodate employees' desire to learn and encourage them to apply for jobs inside the company by using the internal job posting system.

#### Human Resources Strategy

#### Global Professional Development

To provide products that have customer value, the entire global value chain must operate effectively and efficiently. This requires global talent with extensive knowledge and experience in different functions who can effectively coordinate operations and rapidly make the right decisions. To develop leaders who share common values and promote personnel exchanges across regions, we hold a global seminar every year for managers at our overseas affiliates. For overseas talent, we work in collaboration with local top management and HR departments to define roles and requirements and formulate succession and development plans for key positions and key personnel. Through these actions, we are working to best position our people from a global perspective and continue to discuss optimal staffing of functions internally.

The Global Incubation Seminar (GIS) is an educational training program aimed at systematically developing the next generation of leaders at Epson Group companies worldwide. Through this program, we share Epson's vision and values and nurture the ability of these leaders to put the vision and values into practice within their organizations. More than 400 people have participated in the GIS since it was first held in 1999, many of whom now hold managerial positions in our overseas affiliates.



#### Internal Job Posting and Rotation Systems

Epson sees job rotations as a means for employees to develop their careers, continue to grow, and better adapt to change. We have set a target of achieving a rotation rate of at least 15%. Rotations have been made a requirement for promotion and an objective in management evaluations. We are also systematizing training for personnel moving into new roles. We created an internal job posting system in 2007 and changed it in 2021 so that employees no longer need the approval of their manager to apply. This has resulted in a big increase in applications and actual transfers. By giving employees opportunities to gain experience, broaden their horizons, and enhance their skills, we encourage them to pursue their ambitions while developing professionally.

#### Rotation Rate

	FY2019	FY2020	FY2021	FY2022	FY2023
Rate	6.0%	7.3%	9.0%	10.0%	10.1%

#### ■ Internal Job Posting System Users

	FY2019	FY2020	FY2021	FY2022	FY2023
Applicants	142	148	378	293	325
Rotations	27	12	217	201	176





**Human Resources Strategy** 

# Strategy 3

# **Organizational Activation**

Enhance employee engagement and maximize the collective strength of organizations by equipping employees with the ability to adapt to change, embracing diversity, creating a good work environment and organizational climate, and managing health, safety, and well-being. We began using a third-party engagement survey in FY2022. The overall rating in the survey in FY2023 was BB, one rank higher than the previous year. We will continue these efforts to strengthen our organizations.

#### Organizational Climate

Since 2005, Epson has conducted an annual survey to assess the current organizational climate. The goal is to further increase employee motivation, initiative, and enthusiasm. The engagement survey revealed that there is a foundation of trust across the company and that employees do what they are told. However, it also showed that there are many challenges to realizing a self-sufficient organization in which individuals take the initiative to improve the weaknesses of the organization. The challenges are to (1) instill our philosophy among employees, (2) change the prevailing mindset and adopting an outward-facing perspective, and (3) achieve further growth and a sense of contribution through work. Survey results are discussed, and plans and targets are set to shore up areas of weakness. To help managers improve their workplace, we provide them with one-on-one training and counseling. We also provide support where it is needed.

#### ■ Employee Engagement Survey Results and Targets

Company-wide Indicators	FY2022	FY2023	Targets (End of FY2025)
Overall rating	В	BB	Α
Score	51.8	52.9	58.0
Workplaces with a D rating	47	45	0
Sub-category			
Work content	3.2	3.3	3.6
External adaptation	3.2	3.2	3.6
Change initiatives	3.1	3.2	3.6

FY2023 employee satisfaction

Satisfaction<sup>1</sup> 94.6%

Completion rate<sup>2</sup> **96.9%** 

## Fostering a Better Workplace

Epson aims to create an environment where employees feel motivated and can work with vitality and in a physically and mentally healthy and safe manner while adapting to change. We offer flexible work arrangements. Employees can work flexible hours and remotely so that they can balance work with their personal responsibilities and needs, such as childcare, nursing care, and medical or infertility treatment. We also have in place measures to prevent workplace harassment and excessive overtime.

We believe that it is important to empower our employees and give them options when it comes to work arrangements so that they can realize their career goals and so that we can hire and retain management talent, specialists, and a diverse workforce.

#### ■ Progress on FY2023 Initiatives to Provide More Flexible Work Arrangements

Goals	Actions	FY2023 Accomplishments
	Evolve the remote work system	Revised the system to allow employees to work in one-minute increments (9/2024)
Flexible work location and hours	Set guidelines for working onsite and working from home	Set guidelines for working onsite and working from home, taking into account the importance of face-to-face communication, organizational management issues, and flexible working styles
	Introduce flex time with no core hours	Eliminated core time
A healthy care-work balance	Healthy balance between work and treatment	Expanded leave and leave of absence system for infertility treatment

#### ■ Changes in Organizational Activation Indicators

Indicator	FY2021	FY2022	FY2023	Future Goals
Paternity leave acquisition rate	50.8%	97.2%	85.2%	100% every year
Online anti-harassment course completion rate	92.4%	96.8%	97.6%	100% annual completion rate
Reporting of serious harassment cases to the Head Office	Failures to report: 0	Failures to report: 0	Failures to report: 0	Continue to strengthen cooperation with organizations and affiliate reporting channels
Annual actual total working hours	1,854 hours	1,845 hours	1,866 hours	FY2024: 1,845 hours





<sup>&</sup>lt;sup>1</sup> Percentage of respondents who rated their satisfaction 3 or higher on a 5-point scale

<sup>&</sup>lt;sup>2</sup> Seiko Epson regular employees and employees rehired after reaching mandatory retirement

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# Diversity, Equity & Inclusion

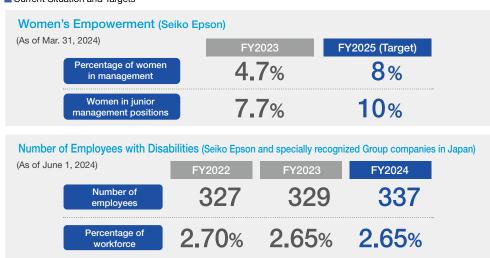
We need to understand our diverse customers and continue creating new value that surprises and delights them in this time of rapid change. To achieve this, we aim to create a fair and bias-free environment in which individuals of all backgrounds gather from all over the world, respect each other, enjoy work, conduct themselves as responsible members of society, and continue driving innovation by taking on challenges and growing along with the company. We recognize that gender equality is an urgent issue in Japan. The ratio of women in executive and managerial positions is far below the 17.3% ratio of women in Seiko Epson's workforce, so we are acting to increase the number of women manager candidates with career development support.

We are also promoting the advancement of people with disabilities. We want to enable them to contribute to the company by taking on challenges and continuing to grow. They are being recruited throughout the Group and new businesses geared toward them are being developed at special-purpose subsidiaries. We are also creating opportunities to intersect with people with disabilities and providing information to foster a climate in which they can thrive.

To lay the foundation for these activities and promote a change in employee awareness, we issue executive messages, provide managers with diversity management training, and hold DE&I fairs. We want to help all employees thrive and are working to create a fair and worker-friendly workplace. We provide counseling services, and encourage fathers to take childcare leave.

We have also put in place career support programs and an education program that provides self-study opportunities to support career development and advancement of all.

#### ■ Current Situation and Targets



#### **Gender Equality**

We aim to enable employees to fully demonstrate their abilities regardless of gender and other attributes. We are working to eliminate the existing gender gap and prevent a new gap from forming by encouraging women to seek advancement and promoting a company-wide shift in mindset, particularly among management.

- Career training for female leaders
- Career support for veteran female employees
- Individual career training
- Skill-up training
- Seminars on essays and interviews for people who take promotion exams
- Measures for young women using external mentoring services
- Diversity management training for new managers
- Group-wide diversity personnel meetings and the Diversity Council among Group companies in Japan



# Advancement of People with Disabilities

We want to enable people with disabilities to contribute to the company by taking on challenges and continuing to grow. Our goal is to have a people with disabilities account for 3% of our workforce in FY2030, and we will promote their advancement throughout the

- •Foster an inclusive climate
  - Hold discussions with people who are interested in the advancement of people with disabilities
- Issue company newsletter articles

Group through the initiatives listed below.

- Provide more opportunities for people with disabilities at special subsidiaries and share the knowledge within the Group.
- Provide counseling for people with disabilities.



President Ogawa visited a special subsidiary, Epson Mizube Corp. and learned about work being done by people with disabilities.

# A Healthy Balance Between Work and Care or Treatment

We are implementing measures to create an environment in which people can work with a sense of purpose and enthusiasm as they adapt to the changes that come at different stages of life.

- Training for managers in the healthy balance between work and elder care
- Post interviews with employee role models on the company intranet (balancing parenting and elder care)
- Parental seminar (balancing parenting and work)
- Paternity leave promotion activities
- Introduction of leave systems for fertility treatment









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# Health and Productivity Management

Epson is working to create an enjoyable and dynamic workplace environment to ensure employee physical and mental well-being.

In 2024, we revised our Health and Productivity Management Declaration to clearly state that our health management programs are for all Epson Group contributors and not just our own employees. The Declaration is being rolled out globally. With this, we are reiterating our commitment to promoting the health and well-being of everyone in the global Epson Group and to fulfilling our aspirational goal of achieving sustainability and enriching communities.

# Health and Productivity Management Declaration

At Epson, we consider the health of all people in the Epson Group to be our top priority. We therefore take a proactive, participatory approach to creating a rewarding, dynamic, and engaging workplace environment and promoting physical and mental wellness for all.

Our goal is for all Epson Group contributors to feel energized, produce results that surprise and delight, and make the world a better place.

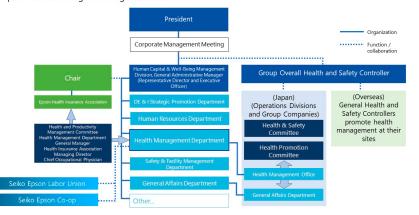
People: Top management, employees, contractors, temporary workers, and other workers who do work activities and are under the control of the company.

Yasunori Ogawa President and CEO Seiko Epson Corporation

# **Health and Productivity Management Organization**

Seiko Epson created an integrated Human Capital & Well-Being Management Division under the president, who holds the ultimate responsibility for health management, to drive the Group's unique health initiatives forward. The Representative Director and General Administrative Manager of the division is responsible for overseeing all health management initiatives. As an Executive Officer, this individual participates in the Corporate Management Council and serves as the Chair of the Health Insurance Association. Our overseas sites are promoting health and well-being in stages based on the Epson Group Mid-Range General OH&S Plan and in line with local laws and culture. A Health and Productivity Management Committee, which is jointly run by the company and the health insurance association, is responsible for analyzing health and productivity-related data and for establishing, evaluating, and improving health-related measures and policies. Health promotion committees, led by employees and involving the company and health insurance association, meet regularly to coordinate activities.

#### Epson Health Management Organization



# Mid-Range Health Management Policy

# Health Action 2025 Initiatives (Year 2)

In Japan, Epson has been establishing and regularly updating mid-range health plans since 2001. Under Health Action 2025, a four-year plan ending in FY2025, Epson is focusing on safeguarding mental and physical health and workplace health, which could be impacted by new work arrangements, an aging workforce, and other changes. Under the slogan "Notice, learn, act, and acknowledge," we aim to foster self-management of mental and physical health, achieve a balance between work and health, and develop a vibrant workplace climate where there is good teamwork.

# Mental and physical health - Fostering autonomy - Harmonious balance between work and health Morkplace health - Attentiveness to safet - Developing a vibrant workplace climate whre there is good

**Human Resources Strategy** 

Notice, learn, act, and acknowledge



#### Health Action 2025

https://corporate.epson/en/sustainability/our-people/health-and-productivity.html

Slogan

# Mid-Range Health Management Policy Indicators

India	cators o	f Employee Consciousness Transformation and Behavior Change	FY2022	FY2023	FY2025 Targets
	Str Str	Percentage of people who are managing stress	_	82.0%	
<u> </u>	Stress manag	Percentage of people who have identified stressors	_	87.3%	Higher than
Mental	Stress management	Percentage of people who are acting to relieve stress	_	75.3%	last year
l and	ent	Percentage of people who can independently seek advice or help when facing problems	_	73.3%	
	Perce	ntage of people who practice ≥ 6 of the 9 healthy lifestyle habits	42.8%	43.9%	≥ 50%
Physical	Physique	Percentage who maintain a suitable body weight	62.5%	62.5%	≥ 60%
		Percentage of overweight people who lost ≥3% of their body weight from the previous year	19.2%	19.4%	≥ 22%
Health	Percentage undergoing physicals	Percentage who undergo further tests based on results of physical	83.8%	89.8%	≥ 90%
alth	ntage going cals	Percentage who undergo further tests for cancer	67.0%	71.1%	≥ 90%
	Increa	se in people who can perform all four simple locomotion checks	_	38.0%	Increase from 38.0%
<b>\$</b>	Decre	ase in the number of employees on mental health leave	0.97%	0.98%	≤ 0.8%
ork	No he	alth problems due to long working hours	1	1	0
Workplac	No ou	tbreak of infectious disease in the workplace <sup>2</sup>	2	0	0
O O	Orga	Number of high-risk workplaces	7	12	0
Health	Organizational climate <sup>1</sup>	Workplaces that continue to be or are once again high-risk	4	2	0
=======================================	ional	Work engagement	2.49	2.50	≥ 2.52

<sup>1</sup> Seiko Epson only <sup>2</sup> Group infection outside work

Health and Productivity

# Recognition Under the Health & Productivity Stock Selection Program

In 2024, Seiko Epson was recognized for the third consecutive year as an outstanding enterprise under the Health and Productivity Stock Selection Program by METI and the Tokyo Stock Exchange. (The company's total score put it at No.1 in electrical equipment industry.) The company was also certified for the eighth consecutive year under the Certified Health and Productivity Management Organization Recognition Program (White 500) by METI and the Nippon Kenko Kaigi.





# **Human Rights Initiatives**

Epson's business operations are rooted in our corporate purpose and the Epson Way. We understand that respect for human rights in our business activities is an important responsibility, and we are fulfilling this responsibility through initiatives that are aligned with the UN Guiding Principles on Business and Human Rights.

Our human rights initiatives are spearheaded by Seiko Epson's DE&I strategic promotion department under the executive officer in charge of human capital and well-being management. This department is addressing issues by building a network with other relevant departments at Epson's global affiliates. To

2

3

5

appropriately address human rights issues in the supply chain, the department in charge of socially responsible procurement educates our personnel about Epson's human rights policy and code of conduct, assesses human rights impacts, and takes remedial action where needed. It has also set up a whistleblowing system that suppliers can use to report issues.



#### **Epson Group Human Rights Policy**

The Epson Group Human Rights Policy was revised with board approval on April 1, 2022, to align it with the United Nations Guiding Principles on Business and Human Rights. Serving as our top-level guideline, the Epson Group Human Rights Policy states our stance on human rights. Our efforts to engage in practices that demonstrate respect human rights extend beyond the Epson Group and into our supply chain.

#### Approach to Human Rights Due Diligence

Epson continuously implements a human rights due diligence process to identify, investigate, prevent, and address human rights abuses across the value chain, including at Group companies and in our business partners' operations.

**Human Rights Due Diligence Process** 

#### Human Rights Due Diligence Framework Disclose and provide Identify and assess adverse impacts (SAQ, feedback on addressing reporting channels, etc.) adverse impacts 2 6 Provide Communicate policies support and & auidelines and cooperation request compliance remediation 3 Monitor & audit the Remediate adverse

impacts (prevention

and mitigation)

remediation of adverse

impacts and measure the

effectiveness of the response

#### Human Rights Due Diligence Activities

#### Identify and assess adverse human rights impacts.

Epson is a member of the Responsible Business Alliance (RBA), a global coalition dedicated to corporate social responsibility (CSR) in global supply chains, and adheres to the RBA Code of Conduct. At Epson, the areas particularly susceptible to human rights abuses involve labor and occupational health and safety issues related to Seiko Epson and Epson Group company employees, temporary staff, supplier employees, on-site service vendor workers, and migrant workers. Geographically, this is particularly relevant in Asia, and in terms of industry, it is most prevalent in manufacturing.

# Formulate a corrective action plan to prevent or mitigate adverse impacts.

Once a year, we ask all Epson business sites, Group companies in Japan and overseas, and suppliers to complete a CSR self-assessment questionnaire (SAQ) that conforms to the RBA SAQ. The CSR SAQ results are reported to the RBA, Sites and suppliers that identify adverse human rights impacts formulate corrective action plans to remedy or mitigate those impacts.

# Monitor results and progress.

All sites, Group companies, and suppliers are, with the involvement of management, working to remedy and mitigate adverse human rights impacts in accordance with corrective action plans. We monitor the progress of corrective action to remedy significant adverse impacts and see them through to completion. Through the annual CSR SAQ, we monitor the state of corrective actions at each company and business site.

# Communicate and report performance.

Epson's efforts to remedy issues are reviewed annually and reported on Epson's websites and in its Sustainability Report. The Epson Group's global efforts are also reported through statements on modern slavery and human trafficking. To build and maintain good labor-management relations, Epson actively provides information to its employees and engages them in sincere talks and discussions.

#### Examples of remediation through human rights due diligence

Epson voluntarily and systematically undergoes RBA Validated Assessment Program (VAP) audits at its main production sites to identify and correct issues from a third-party perspective so that it can improve. So far, Epson's manufacturing facilities in Indonesia, Malaysia, Thailand, China, and the Philippines have all earned Platinum recognition. Platinum is exclusively reserved for factories that are compliant with the RBA Code of Conduct and receive a perfect score of 200. The main adverse impacts that were identified in the Epson Group through the FY2023 CSR SAQ or RBA VAP audits are shown in the table on the right.

Situation	Location	How it Was or Is Being Addressed
Long working hours for a subcontractor's employees	Subcontractor	Implemented corrective action with the subcontractor.
Workers are charged employment fees	Subcontractor	Money was refunded.
Violation of the Worker Dispatch Act	Manufacturing company	Keep outsourced operations within the scope of the law.
Nonconforming emergency exit door along a factory evacuation route	Manufacturing company	The structure of the emergency exit door has changed.







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**Human Rights Initiatives** 

We have been communicating the RBA Code of Conduct and its requirements to relevant departments and people in Epson's global operations who are involved in human resources, health and safety, environmental issues, ethics, and supply chain management. In addition, to raise awareness of human rights issues, we provided an online course titled "Business and Human Rights" in FY2022. The course covered the fundamental aspects of respect for human rights and Epson's initiatives in this area and was taken by all directors, employees, contract employees, and dispatch workers of Seiko Epson and its affiliates in Japan. The same course has been given at overseas subsidiaries since 2023 and is mandatory for managers and executives.

#### Grievance Mechanism

In addition to the Epson Helpline, Epson provides advisory services for reporting or discussing human rights-related issues such as harassment, long working hours, diversity and so forth. We also have supplier whistleblowing systems. Moreover, since April 2024, customers, investors, local residents, and all other stakeholders can file grievances via an Engagement and Remedy Platform provided by the Japan Center for Engagement and Remedy on Business and Human Rights (JaCER). These reporting channels strictly control the content of reports, protect the identity of person to lodge reports, and forbid reprisals against them.

#### Human Rights Measures in the Supply Chain

#### Supply Chain Initiatives

Epson has declared in its Human Rights Policy that both Epson and its suppliers shall respect human rights. As stated in our policy, we strive for complying with the United Nations Guiding Principles on Business and Human Rights and respecting internationally recognized human rights as stated in the Universal Declaration of Human Rights and other relevant instruments. Moreover, we support the purpose of the RBA and, as a member, seek to ensure that our suppliers also comply with the RBA Code of Conduct.

Epson, together with its suppliers, is committed to ensuring that human rights are respected throughout the supply chain.

#### Supply Chain Human Rights Due Diligence Framework

- 1 Communicate supplier quidelines, educate suppliers, and request compliance.
- 2 Assess adverse impacts at supplier sites through SAQs & whistleblowing systems.
- 3 Take corrective action to prevent, cease or mitigate adverse impacts.
- 4 Measure the effects of adverse impacts by monitoring, audits, and feedback from grievance mechanisms.
- 5 Disclose and provide feedback on addressing adverse impacts.
- 6 Provide for remediation.

## Salient Human Rights Issues

Epson has identified particularly important human rights issues that must be dealt with on a priority basis. These were drawn from sources such as the ILO Core Labour Standards, the principles of the UN Global Compact, and the RBA Code of Conduct. When issues are reported or identified through periodic CSR risk assessments, the situation is monitored until it has been corrected.

- Prohibition of child labor (ILO Convention No. 138/182 & A2 in the RBA Code of Conduct)
- Prohibition of forced and compulsory labor (ILO Convention No. 29/105 & A1 in the RBA Code of Conduct)
- Proper management of working hours (a 60-hour maximum workweek and at least one day off every seven days) (A3 in the RBA Code of Conduct)
- Proper payment of wages (payment of the legal minimum wage and overtime wages, and timely payment of wages) (A4 in the RBA Code of Conduct)
- Humane treatment (no harassment) (A5 in the RBA Code of Conduct)
- Non-discrimination (ILO Convention No. 100/111 & A5 in the RBA Code of Conduct )
- Freedom of association and the right to collective bargaining (ILO Convention No. 87/98 & A6 in the RBA Code of Conduct)
- A safe and healthy work environment (ILO Convention No. 155/187 & B. Health and Safety in the RBA Code of Conduct)

# Remediation Through Supplier Whistleblowing Systems ······



To provide remedy as required by the UN Guiding Principles on Business and Human Rights, all Epson Group companies worldwide have a whistleblowing system that suppliers can use to report or consult about issues. Reports can be made anonymously and in the local language. Retaliation against persons for having lodged a report is strictly prohibited.

Our whistleblowing systems are accessible from our website and are easy to use. We inform suppliers about these systems and encourage them to use the systems. When we become aware of adverse human rights impacts through reports or audits, we provide support until a remedy is provided. Reports function as a means to measure the effectiveness of remedies.

# Examples of Remediation at Supplier Sites Through Human Rights Due Diligence



- Proper management of working hours (granting of one day off per week and statutory holidays)
- Proper payment of wages (proper payment of overtime)
- Employment contracts executed
- Restrictions on restroom use eliminated (e.g., frequency restrictions)
- Refund of recruitment fee paid by workers
- Evacuation drills (with full participation facility wide, nighttime, dormitories, etc.)
- Proper personal protective equipment inspected, replaced, and provided at no cost to workers
- Safety measures provided for pregnant and nursing mothers also with a clean lactation room

# Human Rights Education for Suppliers ······



To foster understanding of human rights, we ask suppliers to observe the Epson Group Supplier Guidelines. We also hold supplier conferences and seminars that many suppliers attend.

We believe it is important for suppliers to understand the purpose of human rights initiatives and to engage in them voluntarily. Given the constantly evolving expectations of society, we hold annual seminars taught by outside consultants to provide suppliers with expert information.







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# Supply Chain Strategy



# Realizing Responsible Supply Chains

Epson wants to help solve societal issues and achieve sustainable growth through sustainability initiatives based on the idea of building social trust, the concept that underlies Epson's Management Philosophy. We are building social trust by complying with local laws and regulations in the contries and regions where we operate, as well as by honoring international sustainability initiatives such as the Sustainable Development Goals (SDGs) and the Responsible Business Alliance's Code of Conduct, Furthermore, as outlined in the United Nations Guiding Principles on Business and Human Rights, Epson's responsibility extends to its value chain.

To attain our goal of achieving sustainability and inriching communities, we are working to ensure socially responsible supply chains and sustainable procurement from the standpoints of human rights and sustainability. In addition, with the cooperation of our business partners and the collaboration of our suppliers, we will proactively take on new challenges, including initiatives meant to solidify business continuity management, transit to 100% renewable electricity, and reduce greenhouse gas (GHG) emissions on our way toward building a green supply chain. Epson will strengthen its partnerships based on the fundamental stance of fairness, equity, and mutual prosperity with business partners, while working to build a responsible supply chain.

# **Action Theme**

Epson believes that building a strong and flexible supply chain is essential if we are to fulfill our responsibility to deliver products to our global customers. Responsible supply chains is one of the key sustainability topics that we are addressing, and we have been systematically working Group-wide on projects to ensure business continuity management (BCM), CSR, and responsible sourcing of minerals.



# **Supplier Guidelines**

The Epson Group Supplier Guidelines set forth its basic quality, price, and delivery requirements as well as Epson's expectations regarding environmental initiatives and compliance, including trade control and security. The Epson Supplier Code of Conduct, which is part of the Guidelines, is based on the RBA Code of Conduct. It specifies supply chain requirements in the areas of labor, health and safety, environment, ethics, and management systems. The RBA requires compliance with local laws and requires compliance with the RBA's criteria when they are stricter than local laws. This ensures a certain level of good practice even if countries and regions where suppliers are located have not established laws, standards, and labor practices. In April 2024, we revised the Epson Group Supplier Guidelines to align it with Version 8.0 of the RBA Code of Conduct. Content concerning our procurement policy and expectations for suppliers was updated.

The revised Guidelines are posted on our website. All suppliers are notified about the Guidelines, and major suppliers are asked to sign a formal written agreement to comply with them.



# **CSR Strategy in Supply Chains**

To live up to our Management Philosophy and Principles of Corporate Behavior and to solve societal issues, we have strategically established key long-term actions for supply chain CSR. We approach supply chain CSR from the perspective of human rights and sustainability.

Promoting decent work

Ensuring work safety

Responsible mineral sourcing

Reducing environmental impact

# The Epson Green Supply Chain

Accelerating and efficiently reducing environmental impact is an urgent global imperative, so we are assisting our suppliers by launching the Epson Green Supply Chain program. Under this program, we share our own experience and knowledge and assist suppliers so that they can take the best action for their situation. The goal is to effect a switch to renewable electricity and reduce greenhouse gas (GHG) emissions throughout the supply chain.

#### Specific Actions

- Educate suppliers about the importance of reducing environmental impact and about how to achieve.
- Take a detailed survey to assess suppliers' current situation offer a solution to reduce their environmental impact.
- Provide assistance to help suppliers switch to renewable electricity and reduce their GHG emissions.
- Work with suppliers to promote collaborative projects to reduce environmental impact.







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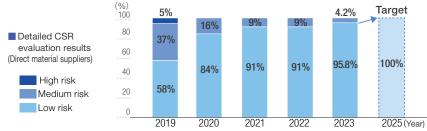
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## **CSR**

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Epson has a program to evaluate suppliers from multiple angles. The program consists of an indirect evaluation based a third-party credit investigation and direct supplier self-assessments. There are four types of self-assessments: (1) a periodic assessment of quality, cost, delivery, environment, management systems, and information security; (2) a detailed CSR evaluation to evaluate compliance with the Epson Supplier Code of Conduct; (3) an evaluation of the supplier's ability to respond to emergencies; and (4) a safety management evaluation in which suppliers assess their response to risks such as fire and other emergency situations. The detailed CSR evaluation is part of a due diligence program that starts with a self-assessment (SAQ) of compliance with the Epson Supplier Code of Conduct and includes corrective actions, audits, and other measures. It is implemented in accordance with the RBA member program. In 2023, we asked our major direct material suppliers and indirect material suppliers (on-site service vendors at Epson manufacturing sites, labor agents, logistics warehouse operators, call centers) to complete a detailed CSR evaluation. No high-risk suppliers were detected, but we asked suppliers who had human rights issues or regulatory violations to take corrective action. Example of correction action in 2023: A manufacturing contractor reimbursed foreign workers for recruitment fees it charged them in their country of origin (for Japanese language education, VISA acquisition fees, etc.). We want 100% of our major suppliers to be low risk by 2025, so we are providing ongoing support and responding to changes in RBA requirements. In addition to judging risk based on score, we remedy individual human rights issues that are detected.



# **CSR Seminar for Suppliers**

In addition to explaining social demands and Responsible Business Alliance (RBA) requirements at supplier conferences for CSR, we also hold seminars and conferences to provide further detail and ask for cooperation. Many suppliers attend these events. We also survey suppliers to understand their needs and incorporate that information in our seminars and conferences.

Epson believes that it is important for suppliers to understand the need for CSR programs and to take the initiative to launch their own. We see human rights as a priority issue - and one in which the expectations of society are rapidly evolving. We therefore hold seminars taught by outside consultants to provide suppliers with expert information. In addition, we hold conferences to foster understanding and enlist supplier support for the building of a "Epson green supply chain". We also hold a seminar taught by an outside consultant about reducing environmental impact. In FY2023, we also held a conference to explain changes in the latest revisions of the RBA Code of Conduct and Epson Group Supplier Guidelines. The more than 1,000 people who attended gained an understanding of Epson's procurement policies and the RBA Code of Conduct.

# Responsible Minerals Sourcing

Profits from the extraction and sale of minerals such as tin, tantalum, tungsten, and gold (3TG) in conflict-affected areas such as the Democratic Republic of the Congo (DRC) and adjacent countries are a source of funding for armed groups and anti-government forces carrying out atrocities and gross human rights abuses. Furthermore, it has been pointed out that cobalt mines in the southern part of the DRC have become breeding grounds for child labor. Mineral mining and trade have negative social and environmental impacts.

Epson avoids any association with any forms of human rights abuses and environmental destruction. As a member of the Responsible Minerals Initiative (RMI), Epson does not tolerate human rights abuses in the procurement of minerals used in Epson products. We will not engage in business relationships with any party involved in human rights abuses, nor will we support operations that result in the degradation of socioeconomic and environmental conditions. We conduct supply chain due diligence annually in accordance with the OECD's five-step frame-

work for components and materials used in the products we manufacture and that may remain in the final product. We disclose the results to the public and respond to survey requests from

■ 3TG and Cobalt Survey Results (FY2023)

	3TG Total	Tin	Tantalum	Tungsten	Gold	Cobalt
Identified smelters or refiners (SOR)	357	89	43	52	173	80
CFS smelters <sup>1</sup>	234	70	40	34	90	46
Active SOR <sup>2</sup>	5	2	1	0	2	4
Supplier response rate	100%					98%

See the back cover for footnotes 1 & 2

# **BCM**

our customers.

The risk of supply chain disruptions was found to be far greater than assumed when COVID-19 broke out in 2019, followed by global chip and shipping container shortages. Supply chain threats, including regional conflicts and geopolitical and disaster risks, have not been resolved. If anything, they have increased. Today's sophisticated and complex supply chains are susceptible to risks and crises. To establish a robust and sustainable supply chain, we are decentralizing functions, securing alternatives, and increasing resilience. We have divided the supply chain functions into five categories (suppliers, procurement, production, sales, and logistics) and are addressing the priorities that have been set for each. Our business continuity plans (BCP) are designed to ensure that we can supply products and services to our customers and minimize damage and losses, and we maintain and improve our BCP as needed.

Function	Key Action Items
Suppliers	Impress on suppliers the need to enhance their own supply continuity capabilities by, for example, evaluating their emergency response capabilities and safety management
Procurement	Multi-sourcing, securing alternative sources for procured goods, executing long-term procurement contracts, strengthening partnerships, and maintaining inventory of parts and raw materials * Applies to direct materials and parts and to indirect materials
Production	Strengthening the distributed production organization, increasing the resilience of facilities, strengthening measures to prevent the spread of infectious diseases, and securing product inventories
Sales	Maintaining operations sites, human resources, and an IT backup system
Logistics	Securing space on ships by negotiating with shippers and strengthening relationships with them, improving the accuracy of shipping plan management, and securing multiple logistics modes and methods (carriers, transportation routes, and warehousing functions)



