

PFU Environmental Action Plan

The progress of the 10th Environmental Action Plan (Fiscal 2022 - Fiscal 2024) is as follows:

Activity		Details		Results from fiscal 2022	Targets for fiscal 2023	Targets for fiscal 2024	
Green Solution	1	Continuous Creation and Provision of Eco-efficient Products	To produce products with top-level energy efficiency	Scanner products	Product compliance with the International ENERGY STAR Program Ver. 3.X: 100% (2 models)	Product compliance with the International ENERGY STAR Program Ver. 3.X: 100%	Product compliance with the International ENERGY STAR Program Ver. 3.X: 100%
				Embedded computing products	Environmental performance index: 4.40	Environmental performance index: 4.30 or less	Environmental performance index: 4.13 or less
					Environmental contribution to our customers' sites 7,803 tons of CO ₂	Environmental contribution to our customers' sites 8,855 tons of CO ₂ or more	Environmental contribution to our customers' sites 10,052 tons of CO ₂ or more
				Interactive KIOSKS	Environmental performance index: 15.74	Environmental performance index: 14.50 or less	Environmental performance index: 12.00 or less
					Environmental contribution to our customers' sites 1,765 tons of CO ₂	Environmental contribution to our customers' sites 1,318 tons of CO ₂ or more	Environmental contribution to our customers' sites 876 tons or CO ₂ or more
				Network appliance products	Environmental performance index: 0.545	Environmental performance index: 0.519 or less	Environmental performance index: 0.494 or less
					Environmental contribution to our customers' sites 274.8 tons or CO ₂	Environmental contribution to our customers' sites 274.2 tons of CO ₂ or more	Environmental contribution to our customers' sites 276.5 tons or CO ₂ or more
				Security products	Environmental performance index: 0.264	Environmental performance index: 0.251 or less	Environmental performance index: 0.238 or less
					Environmental contribution to our customers' sites 631.7 tons of CO ₂	Environmental contribution to our customers' sites 668 tons or CO ₂ or more	Environmental contribution to our customers' sites 709 tons or CO ₂ or more
		Solutions	Environmental contribution to our customers' sites 6,736 tons of CO ₂	Environmental contribution to our customers' sites 4,706 tons of CO ₂ or more	Environmental contribution to our customers' sites 4,815 tons of CO ₂ or more		
To comply with environmental labels (EPEAT)	Scanner products	Maintained and expanded compliance with EPEAT Product compliance with EPEAT: 100% (2 models)	To maintain and expand compliance with EPEAT Product compliance with EPEAT: 100%	To maintain and expand compliance with EPEAT Product compliance with EPEAT: 100%			

	2	Promotion of Environmentally Conscious Solutions and Services  	To reduce our customers' environmental burden by expanding our environmentally conscious solutions and services	9 out of 9 departments	At least one suggestion per department (all relevant departments)	At least one suggestion per department (all relevant departments)
	3	Promotion of Green Procurement  	To promote procurement from suppliers that work aggressively in consideration of the environment	Promotion of activities to reduce CO ₂ emissions and to preserve water resources to the upper stream in the supply chain: 100% understanding of business partners' activities (18 partner companies)	Promotion of activities to reduce CO ₂ emissions and to preserve water resources to the upper stream in the supply chain: 100% understanding of business partners' activities	Promotion of activities to reduce CO ₂ emissions and to preserve water resources to the upper stream in the supply chain: 100% understanding of business partners' activities
Green Process	4	Improve Quality and Enhance Business Efficiency 	To reduce the burden on the environment with improved business operations	24 out of 25 departments	At least one suggestion per department (all relevant departments)	At least one suggestion per department (all relevant departments)
	5	Promotion of Global Warming Countermeasures  	To reduce GHG emissions at business operation sites	GHG emissions: 4,930 tons of CO ₂ (40% reduction compared to fiscal 2013)	GHG emissions: 4,988 tons of CO ₂ or less (40% reduction compared to fiscal 2013)	GHG emissions: 4,685 tons of CO ₂ or less (42% reduction compared to fiscal 2013)
Green Mind	6	Promotion of an Environmentally Conscious Culture 	To promote environmental and social contribution activities as well as biodiversity conservation activities, and to improve operation of environmental activities	Promotion of social contribution activities (21 projects)	Promotion of social contribution activities (23 projects)	Promotion of social contribution activities (24 projects)
				Promotion of the sharing/transmitting of environmental information and Promotion of improving operation of environmental activities (14 projects)	Promotion of the sharing/transmitting of environmental information and Promotion of improving operation of environmental activities (14 projects)	Promotion of the sharing/transmitting of environmental information and Promotion of improving operation of environmental activities (15 projects)
				Completed the integration of PFU's certification into the RICOH ISO 14001 certification	Continuous improvement of the management system	Continuous improvement of the management system

Results from Activities in Fiscal 2022

During 2022, the first year of the Tenth Environmental Action Plan (Fiscal 2022 - Fiscal 2024), we pursued 18 environmental targets and achieved 17 of them.

✓: Target achieved -: Target not achieved

Activity	Details	Fiscal 2022					
		Target	Result	Evaluation			
Green Solution 1	Continuous Creation and Provision of Eco-efficient Products 	To produce products with top-level energy efficiency	Scanner products	Product compliance with the International ENERGY STAR Program Ver. 3.X: 100% (2 models)	Product compliance with the International ENERGY STAR Program Ver. 3.X: 100% (2 models)	✓	
			Embedded computing products	Environmental performance index: 4.48 or less	Environmental performance index: 4.40	✓	
				Environmental contribution to our customers' sites 7,800 tons or CO ₂ or more	Environmental contribution to our customers' sites 7,803 tons of CO ₂	✓	
			Interactive KIOSKS	Environmental performance index: 15.80 or less	Environmental performance index: 15.74	✓	
				Environmental contribution to our customers' sites 1,437 tons of CO ₂ or more	Environmental contribution to our customers' sites 1,765 tons of CO ₂	✓	
			Network appliance products	Environmental performance index: 0.546 or less	Environmental performance index: 0.545	✓	
				Environmental contribution to our customers' sites 271.9 tons or CO ₂ or more	Environmental contribution to our customers' sites 274.8 tons or CO ₂	✓	
			Security products	Environmental performance index: 0.264 or less	Environmental performance index: 0.264	✓	
				Environmental contribution to our customers' sites 630 tons of CO ₂ or more	Environmental contribution to our customers' sites 631.7 tons of CO ₂	✓	
			Solutions	Environmental contribution to our customers' sites 4,564 tons of CO ₂ or more	Environmental contribution to our customers' sites 6,736 tons of CO ₂	✓	
			To comply with environmental labels (EPEAT)	Scanner products	Maintained and expanded compliance with EPEAT Product compliance with EPEAT: 100% (2 models)	Maintained and expanded compliance with EPEAT Product compliance with EPEAT: 100% (2 models)	✓

	2	Promotion of Environmentally Conscious Solutions and Services  	To reduce our customers' environmental burden by expanding our environmentally conscious solutions and services	At least one suggestion per department (9 departments)	At least one suggestion per department (Achieved in all 9 departments)	✓
	3	Promotion of Green Procurement  	To promote procurement from suppliers that work aggressively in consideration of the environment	Promotion of activities to reduce CO ₂ emissions and to preserve water resources to the upper stream in the supply chain: 100% understanding of business partners' activities (18 partner companies)	Promotion of activities to reduce CO ₂ emissions and to preserve water resources to the upper stream in the supply chain: 100% understanding of business partners' activities (18 partner companies)	✓
Green Process	4	Improvement of Quality and Enhancement of Business Efficiency 	To reduce the burden on the environment with improved business operations	At least one suggestion per department (25 departments)	At least one suggestion per department (Achieved in 24 out of 25 departments)	-
	5	Promotion of Global Warming Countermeasures  	To reduce GHG emissions at business operation sites	GHG emissions: 5,901 tons of CO ₂ or less (38% reduction compared to fiscal 2013)	GHG emissions: 4,930 tons of CO ₂ (40% reduction compared to fiscal 2013)	✓
Green Mind	6	Promotion of an Environmentally Conscious Culture 	To promote environmental and social contribution activities as well as biodiversity conservation activities, and to improve operation of environmental activities	Promotion of social contribution activities (21 projects)	Promotion of social contribution activities (21 projects)	✓
				Promotion of the sharing/transmitting of environmental information and Promotion of improving operation of environmental activities (14 projects)	Promotion of the sharing/transmitting of environmental information and Promotion of improving operation of environmental activities (14 projects)	✓
				Continuous improvement of the management system	Completed the integration of PFU's certification into the RICOH ISO 14001 certification	✓

Eco-efficient Products

We make efforts to develop and provide eco-efficient products that support "energy-saving", "3R design (*1)", and "management of used chemical substances" in order to reduce the burden on the environment throughout the product's entire life cycle. In fiscal 2022 in order to contribute to reducing the environmental burden at our customers' sites by releasing more products with advanced environmental performance, we engaged in activities setting the improvement of environmental performance as an environmental target for products, solutions, and services in all our business departments and promoted the development and provision of eco-efficient products.

Main Achievements of Fiscal 2022

Producing products with top-level energy efficiency	Scanner products	As planned, we complied with the International ENERGY STAR Program Ver. 3.0 for 2 newly-developed models.
	Embedded computing products	To make environmental contributions, we made efforts to develop better products by improving the environmental contribution indexes that we defined based on our own standards. We have also made efforts to reduce the environmental burden at our customers' sites by providing our products for customers.
	Interactive KIOSKs	To make environmental contributions, we made efforts to develop better products by improving the environmental contribution indexes that we defined based on our own standards. We have also made efforts to reduce the environmental burden at our customers' sites by providing our products for customers.
	Security products	To make environmental contributions, we made efforts to develop better products by improving the environmental contribution indexes that we defined based on our own standards. We have also made efforts to reduce the environmental burden at our customers' sites by providing our products for customers.
	Solutions	We have made efforts to reduce environmental burden at our customers' sites by providing our solutions for the customers.
	Customer services	We have made efforts to reduce environmental burden at our customers' sites by providing our services for the customers.
Complying with environmental labels	Scanner products	As planned, we acquired certification for 2 new models that are to be expanded to North America, for EPEAT (Electronic Product Environmental Assessment Tool), an environmental evaluation system for electronic products adapted as a system for promoting green purchasing, primarily in organizations related to the American government.
		As our environmentally conscious activities, such as 3R design and energy-saving functions became recognized, 2 new models received Eco Mark certification.

(*1) 3R design: Design in which the concepts of "Reduce", "Reuse", and "Recycle" are taken into consideration.

Main Eco-efficient Products for Fiscal 2022

We contribute to reducing the burden on the environment from our customers' business by offering products that comply with the Act on Promoting Green Procurement with energy-saving and 3R design features, and furthermore that comply with various environmental standards. Information about the compliance of our scanners with environmental standards is published on our official company website.



fi-8040



fi-70F

- Product compliance with the Act on Promoting Green Procurement
- Product compliance with the International ENERGY STAR Program Ver. 3.0
Power consumption during sleep mode:
 - fi-8040 1.9 W or less
 - fi-70F 2.0 W or less
- Eco Mark certified product
 - fi-8040 22 155 056
 - fi-70F 22 155 039
- Product compliance with chemical substance regulations (RoHS Directive Regulation, etc.)



Information for EPEAT 4.7.2.2: [Public disclosure of supply chain toxics](#)

Environmentally Conscious Solutions and Services

We provide environmentally conscious solutions and services that contribute to reducing the burden on the environment from our customers' business, such as energy conservation and paperless work, through more efficient business, reduced consumption, reduced movement, and efficient use of space. In fiscal 2022, we moved forward with the activities that contribute to reducing the environmental burden on our customers, such as developing and shipping various solutions and services, and expanding the provision of solutions and services that utilize scanners.

Main Achievements of Fiscal 2022

Reducing our customers' environmental burden by expanding our environmentally conscious solutions and services	Activity	Product
	<ul style="list-style-type: none"> • Development and shipment of environmentally conscious solutions • Expansion of the provision of solutions and services that utilize scanners • Promotion of virtualization, cloud negotiation, etc. 	<ul style="list-style-type: none"> • DynaEye 11 • BIP Smart • PaperStream Capture

Digitization of the Information on Paper Forms (Significant Improvement in Text Recognition Accuracy)

For many customers, especially local governments and government offices, paper-based tasks remain routine, and a large amount of time is spent in the data input of the information written on application documents.

The combination of an image scanner and the OCR software "DynaEye" reduces the time required for the data input of application document information. The text recognition accuracy for AI-OCR (AI-OCR for handwritten Japanese) has also significantly improved with the latest version "DynaEye 11" (recognition accuracy: 96.1% → 99.2% (measured using standard PFU paper forms)). Highly accurate text recognition is now possible even for handwriting that is written diagonally or has been crossed out (writing mistakes), which are issues often found in the processing of paper forms at local government offices that frequently work with handwritten paper forms. Accurate recognition is also now possible for handwriting extending beyond the boundaries of the text box, which had previously made it difficult for writing to be recognized.

AI-OCRでフリーピッチ日本語手書き文字も高精度に認識!

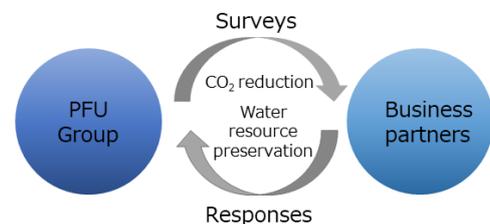
氏名	住所
PFU 太郎	神奈川県横浜市西区みなとみらい
PFU太郎	神奈川県横浜市西区みなとみらい

特外にはみ出した記入	斜め記入	取消線(押印含む)
〒220-0412 所在地(住所) 神奈川県横浜	石川屋町 石川屋町2-2	取消線 (1800)
自動的に追跡して認識	斜めの複数行も認識	取消線や押印を除去

Green Procurement

To provide eco-efficient products, we established "PFU Group Green Procurement Direction", which specifies basic requirements for our suppliers, and we promote environmental activities together with our suppliers.

In fiscal 2022, we promoted activities to reduce CO₂ and to preserve water resources to the upper stream in the supply chain for target business partners, and gained an understanding of the activities of new business partners.



Main Achievements of Fiscal 2022

Promotion of procurement from suppliers that work aggressively in consideration of the environment	Promotion of activities to reduce CO ₂ and to preserve water resources to the upper stream in the supply chain Gained an understanding of the activities of 18 new business partners (100%)
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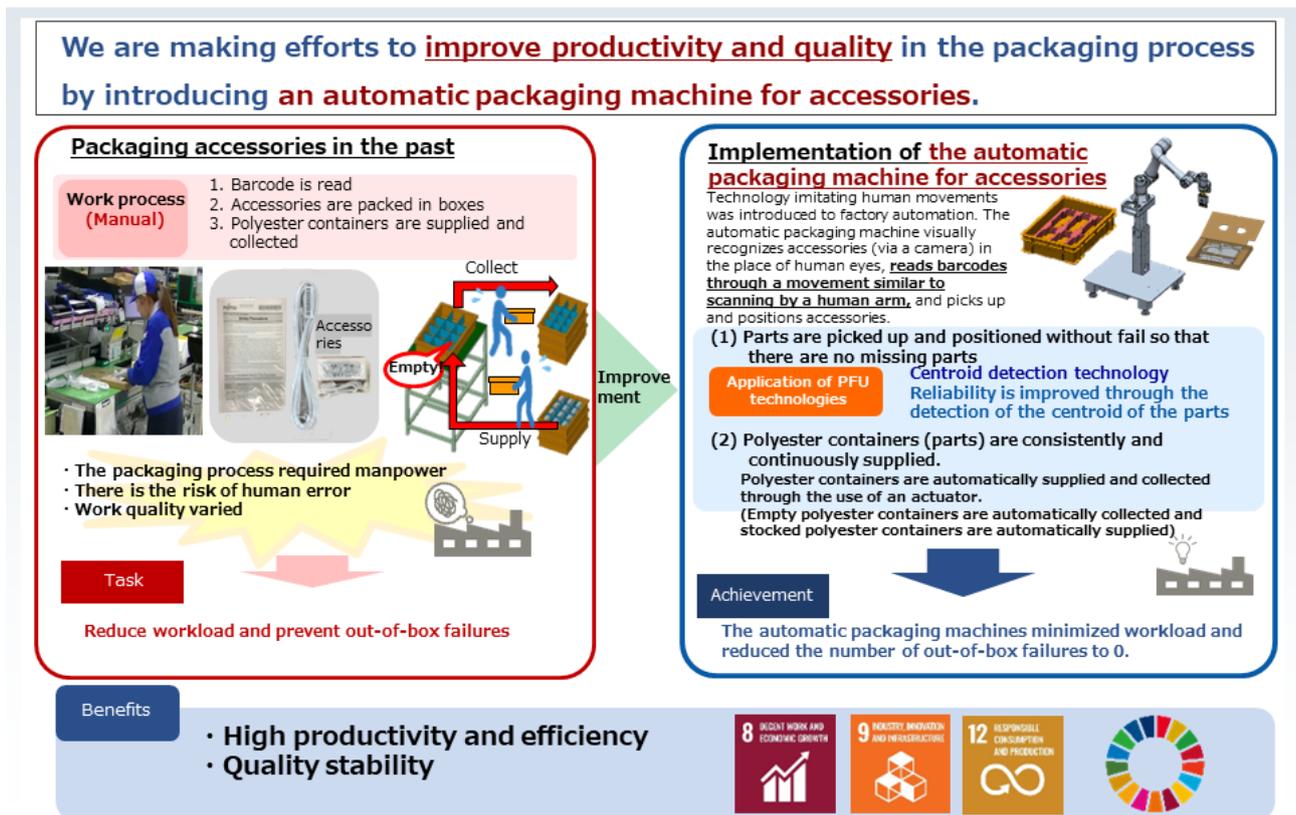
Improvement of Quality and Enhancement of Business Efficiency

Even in in-house work, we promote the reduction of the environmental burden through the enhancement of business efficiency and the improvement of quality using IT, which leads to promoting environmental activities that are focused on our core business.

In fiscal 2022, we promoted the improvement of quality and the enhancement of business efficiency of our core business at all departments.

Examples of Improvements in Fiscal 2022

■ Production Enhancement and Quality Improvement by Implementing Automatic Packaging Machine



Global Warming Countermeasures

To prevent global warming, we engage in energy-saving activities to reduce the amount of energy consumption. (*2)

In fiscal 2022, we made efforts to increase our energy efficiency by installing electrostatic filters in our air-conditioning systems and replacing some of our windows with double-pane windows. We also worked to expand our use of renewable energy.

(*2) Amount of consumption of purchased electricity, gas, and heat, converted into CO₂ (t-CO₂)

(*2) Amount of Energy Consumption (CO₂ Conversion Value: t-CO₂)

Energy consumption	Target for fiscal 2022	Result from fiscal 2022
		5,901 tons of CO ₂ or less

■ Saving Energy by Installing Electrostatic Filters in Air-conditioning Systems

The ProDeS Center saved energy by installing electrostatic filters in the indoor air-conditioning units to improve heat exchange efficiency.

Resulting Energy Savings

Installation Location	ProDeS Center
Installation Date	April 2022
Amount of Reduction in CO ₂ Emissions	16.1 tons of CO ₂



■ Saving Energy by Replacing Some Windows with Double-pane Windows

We saved energy at our Headquarters by replacing some of our windows with double-pane (double-sash) windows to improve insulation. Double-pane windows are effective for sound insulation and prevention of window condensation.

Resulting Energy Savings

Installation Location	Headquarters
Installation Date	January 2023
Amount of Reduction in CO ₂ Emissions	5.0 tons of CO ₂



Environmentally Conscious Culture

Our Group workers promote the protection of the environment through environmental and social contribution activities and biodiversity conservation activities, by entering into a contract and working together with the community and the local government around the company sites. In fiscal 2022, activities that had been suspended due to COVID-19 pandemic restrictions gradually resumed. We participated in the mass beach cleanup sponsored by Kahoku City for the first time in three years, as well as beautification activities in the Kahoku Lagoon reclaimed land and Hama Road Supporter activities.

List of Main Activities

No.	Event name	Done	Implemented at:
1	"Green Fund" donation	April 2022	Ishikawa
2	Hama Road Supporter activities	May 2022	Yokohama Headquarters
3	Cleanup activities on the Kahoku Lagoon	June 2022	Ishikawa
4	Cutting the grass around the PFU Techno Wise Takamatsu Plant	June 2022	Ishikawa
5	Turning the Lights Off	July 2022	All offices/sites
6	Mass beach cleanup activity sponsored by Kahoku City	July 2022	Ishikawa
7	Hama Road Supporter activities	August 2022	Yokohama Headquarters
8	Creation Workshop	September 2022	Ishikawa
9	Cleanup activities on the Kahoku Lagoon	October 2022	Ishikawa
10	Hama Road Supporter activities	November 2022	Yokohama Headquarters
11	Plantation of nandina saplings	December 2022	Ishikawa
12	Displaying Certificate of Green Power (at PFU Charity Concert)	December 2022	Ishikawa
13	Hama Road Supporter activities	February 2023	Yokohama Headquarters
14	Tree-planting activities of trees to block out wind on the Kahoku Lagoon	March 2023	Ishikawa
15	Survey of environmental contribution activities conducted by the RICOH Group	March 2023	Ishikawa
16	Use of local ingredients in the company cafeteria	All year	Ishikawa
17	Collection of plastic bottle caps	All year	All the sites in the nation
18	Collection of used disposable wooden chopsticks	All year	Tokai Office
19	Conversion of food residue into fertilizer	All year	Ishikawa
20	Social contribution through sports	All year	Ishikawa, all sites in the nation
21	Support for regional education	All year	Ishikawa

Volunteer Activities for Kahoku Lagoon Reclaimed Land

In March 2007, we entered into a contract to take part in voluntary activities such as weeding and beautification of the environment to help maintain the beauty of the reclaimed land in the Kahoku Lagoon and the function of its agricultural facilities, as private company No. 1 for the Kahoku Lagoon reclaimed land Improvement Area and Kahoku Lagoon reclaimed land Periphery Improvement Area. In accordance with this contract, in fiscal 2022, we took part in beautification activities and activities planting trees to block out wind in the Kahoku Lagoon reclaimed land.



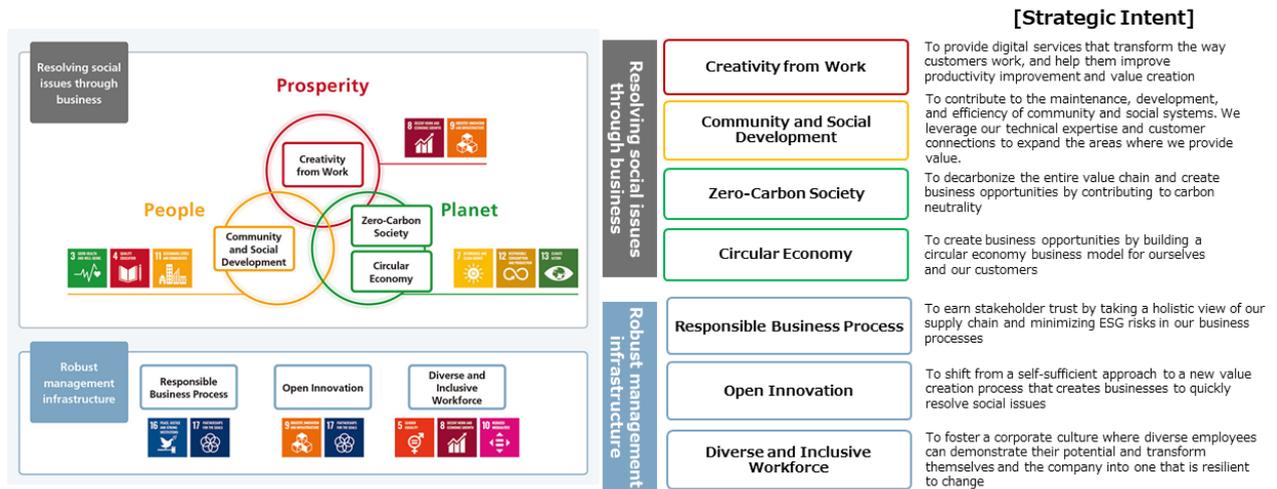
Beautification activities on the Kahoku Lagoon reclaimed land

Action Plan from Fiscal 2023 to Fiscal 2025

The RICOH Group has identified seven material issues in two areas, "Resolving social issues through business," and "Robust management infrastructure," and set ESG targets in linkage with the material issues.

PFU has set ESG targets consistent with the RICOH Group's ESG targets and changed our 10th Environmental Action Plan (Fiscal 2022 to Fiscal 2024) into the PFU ESG Targets (Fiscal 2023 to Fiscal 2025).

Seven Material Issues and SDGs



PFU ESG Targets

Material Issues	ESG Indicators	Fiscal 2023	Fiscal 2024	Fiscal 2025			
Resolving social issues through business	Creativity from Work	Sales of high-end scanners with high added value that contribute to customers' business efficiency (fi Series: global sales)	433,000 units	442,000 units	448,000 units		
	Zero-Carbon society	The rate of reduction in scope 1 and 2 GHG emissions		5,947 tons of CO ₂	5,332 tons of CO ₂	4,697 tons of CO ₂	
		The rate of reduction in scope 3 GHG emissions	Product compliance with the International ENERGY STAR Program Ver. 3.X	Scanner products	100%	100%	100%
			Acquisition of EPEAT	Scanner products	100%	100%	100%
			Environmental performance index	Embedded computing products	4.39 or less	4.30 or less	4.22 or less
		Interactive KIOSKs		14.44 or less	11.33 or less	10.46 or less	
		Network appliance products		0.546 or less	0.546 or less	0.546 or less	
		Security products		0.256 or less	0.256 or less	0.256 or less	
		Amount of environmental contribution to our customers' places of business by providing customers with our products	Embedded computing products	7,956 tons of CO ₂	8,115 tons of CO ₂	8,277 tons of CO ₂	
			Interactive KIOSKs	1,628 tons of CO ₂	1,164 tons of CO ₂	762 tons of CO ₂	
			Network appliance products	277 tons of CO ₂	226 tons of CO ₂	190 tons of CO ₂	
			Security products	648.4 tons of CO ₂	657.8 tons of CO ₂	649.6 tons of CO ₂	
		Environmental contribution to our customers' places of business by providing environmentally conscious solutions	Documents	724.6 tons of CO ₂	773.5 tons of CO ₂	839.3 tons of CO ₂	
			Solutions	3,960 tons of CO ₂	4,023 tons of CO ₂	4,109 tons of CO ₂	

We will be setting our ESG targets for the "Circular Economy" material issue of the "Resolving social issues through business" area and the "Responsible Business Process" and "Diverse and Inclusive Workforce" material issues of the "Robust management infrastructure" area during fiscal 2023.