

KDDI GREEN PLAN

	Reducing risks	Creating business opportunities
Decarbonized society	<ul style="list-style-type: none"> End of fiscal 2025 Making the electricity used at KDDI datacenters around the world net-100% renewable energy <ul style="list-style-type: none"> Excluding the type where the KDDI Group borrows part of other companies' datacenters and facilities to provide services, and datacenters that are scheduled for closure End of fiscal 2030 KDDI Group achieving carbon neutrality Scopes 1+2 End of fiscal 2030 Achieving 50% renewable energy with additionality (KDDI non-consolidated) End of fiscal 2040 KDDI Group achieving net zero Scopes 1+2+3 	<ul style="list-style-type: none"> Helping customers achieve carbon neutrality through DX, LX etc. Producing renewable energy
Circular Economy	<ul style="list-style-type: none"> Pursuing material recycling in business activities <ul style="list-style-type: none"> Material recycling of used mobile phones [1] maintaining a ratio of 99.8% Maintaining zero emissions of withdrawn communication facilities [2] <p>[1] Reusing waste as raw materials by melting them etc. [2] Zero emissions are defined as the final wasted ratio of 1% or less</p>	<ul style="list-style-type: none"> Using our communication network and renewable energy to play a part in creating a circular economy inside society at large and in individual communities
Biodiversity	<ul style="list-style-type: none"> Achieve a net positive impact on biodiversity Commit to no net deforestation by FY 2030 	<ul style="list-style-type: none"> Supporting the visualization and recovery of biodiversity, using ICT, data etc.

■ Recycling of Retired Telecommunications Equipment

KDDI implements reuse activities to recycle and effectively reuse retired telecommunications equipment, and material recycling to effectively utilize equipment and components that are no longer needed due to unavoidable circumstances as resources. Among our various initiatives, we are promoting material recycling of storage batteries installed in switching stations used in test environments that are no longer necessary due to age-related deterioration, thereby making effective use of resources. Generally, retired base stations are disposed of by landfill, but KDDI contributes to waste reduction and effective use of resources through material recycling.

■ Recycling of used cell phones

au Style/shops and UQ Spot collect used handsets (feature phones, smartphones, and Android tablets) regardless of carrier or manufacturer after resetting the devices and crushing them to prevent leakage of stored personal information. The products are then disassembled by hand into their respective components, including circuit boards, LCDs, cameras, plastics, screws, antennas, motors, and speakers. Gold, silver, copper, palladium, and other metals are extracted from the circuit boards, while screws and antennas are recycled into steel products, and plastics are recycled into plastic products whenever possible. When mobile phones are disassembled by machine, the resulting plastics are burned by incineration, but manual disassembly enables material reuse. In addition, recycling eliminates the need for new mining and refining of mineral resources, including oil and iron, and is expected to further reduce CO2 emissions. By ensuring that all disassembly is done by hand, we contribute to realizing resource recycling and a decarbonized society.

case	Result (End of fiscal 2023)	Target
Recycling of used cell phones	Collection Results : 167.3 万台 Material Recycle Ratio (※1) : 99.8%	Pursuing material recycling in business activities -Material recycling of used mobile phones [1] maintaining a ratio of 99.8%
Recycling of Retired Telecommunications Equipment	Amount of material recycled : 298.7t Material Recycle Ratio : 99.8%	Maintaining zero emissions of withdrawn communication facilities [2]

[1] Reuse of waste materials as raw materials through dissolution treatment and other measures.

[2] Zero emissions is defined as having a final disposal rate of 1% or less.

■Use of FSC-certified paper

Since January 2015, KDDI and Okinawa Cellular Telephone Company have progressively changed the bags used at au Shops, au Style, and UQ Spot to paper bags that do not contain any plastic. The target stores annually distribute approximately 5.7 million bags, which are now made of FSC-certified paper.



<Paper bag design using FSC-certified paper>

By using highly recyclable FSC-certified paper made from wood grown in properly managed certified forests, we contribute to reducing deforestation and achieving environmental preservation. Moreover, the rain covers and the bags used to carry catalogs and other informational materials home have been changed to a material containing 25% biomass. In addition, we use environmentally friendly inks and FSC paper for some of our printed media, including catalogs and storefront tools.

■Reduction of paper resources

KDDI is promoting the use of web-based invoices in lieu of paper invoices issued to customers. We are committed to reducing paper usage in order to contribute to reducing environmental burdens, such as deforestation and CO2 emissions.

取り組み	2020年度	2021年度	2022年度	2023年度	2024年度目標
請求書のWeb化による紙削減量	4,962t	5,180t	5,358t	5,548t	5,600t

■ Reduction of plastic use

In June 2024, with the aim of reducing CO2 emissions, KDDI introduced a SIM card that comes in a container half the size of the standard card. Compared to conventional products, this SIM card uses 55% less plastic and reduces CO2 emissions in the manufacturing process by approximately 30%. The compact design also increases the number of cards that can be transported at once, thereby reducing CO2 emissions during transport. In Japan, this SIM card will be the smallest[1] in the cell phone industry in terms of plastic usage.

In its manufacturing process, our suppliers have endorsed and cooperated with our environmental efforts, and we will continue to work together with our entire supply chain to achieve the Scope 3 reduction target.



[1] [In terms of plastic usage per consumer smartphone SIM card, as of the end of May 2024. KDDI research.](#)

■ Water Recycling

KDDI's data center operations reduce water consumption, make use of recycled water, and manage wastewater.

• Reduction of water consumption

Water consumption is reduced through the proper use of air conditioning equipment. We mainly engage in AI control, control of the number of units in operation, proper management of temperature, and equipment renewal. For example, some European data centers have switched from water-cooled to air-cooled cooling facilities, making them environmentally friendly from a water usage perspective. In some data centers, rainwater is reused in the air conditioning systems for the telecommunications machinery rooms. This rainwater is collected in rainwater storage tanks and properly treated before use, thereby contributing to reduced water consumption.

• Water recycling

In addition, cold/heat source equipment is designed so that water circulates within the piping, a measure that has no negative impacts on wastewater.

• Wastewater quality control

Legionella contamination can occur in cooling towers due to the entry of dust and exhaust gases from outside as well as the concentration of corrosive ions and hardness components due to the evaporation of cooling water, but we prevent environmental contamination due to wastewater by implementing chemical injection.

■ Utilization of Plastic Alternatives That Return to the Soil

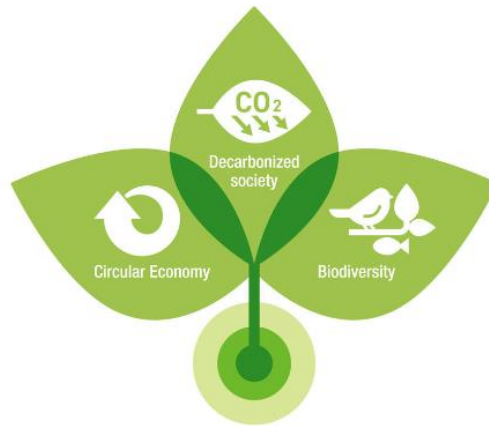
In recent years, ocean and soil pollution caused by plastics and CO2 emissions during plastic production have become problems, and shifting from petroleum-based plastics to alternative materials is progressing around the world. While demand for alternative materials is growing, some bioplastics present challenges, such as the fact that their raw materials compete with food, biomass fuels, and other uses, and that they do not biodegrade easily in seawater or soil environments. AmicaTerra Co., Ltd., in which KDDI Green Partners Fund invested in September 2022, is a startup company that develops and manufactures modo-cell®, a plastic substitute material. modo-cell® can be made from agricultural and food waste (such as bamboo from abandoned bamboo groves) and plant residues from food manufacturing processes. In addition, since it is decomposed by microorganisms in the natural environment, it is expected to contribute to solving environmental problems such as marine and soil pollution caused by plastics.

KDDI has adopted straws made of modo-cell® at BLUE LEAF CAFÉ, a café attached to its directly-managed au Style store, and is also using them in the production of KDDI brand goods. We will continue to consider replacing the plastic products used in our stores and offices as well as aim to promote de-plasticization in our supply chain.



<BLUE LEAF CAFÉ straw>

<KDDI Brand Goods using modo-cell®>



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■ Demonstration to realize horizontal recycling of lithium batteries from used mobile phones
KDDI has invested in Emulsion Flow Technologies Ltd. (EFT), which contributes to rare metal recycling, through the KDDI Green Partners Fund, which invests in startup companies that address environmental issues. We will support EFT's commercial plant development and business expansion as well as contribute to the formation of a recycling-oriented society that does not rely on natural resources.

Demand for storage batteries, particularly lithium-ion batteries (hereinafter, LIBs), is expected to grow further towards the realization of a decarbonized society. Efforts to secure battery resources and to promote the use of recycled materials are advancing globally, and demand is increasing for recycling of used batteries via horizontal recycling. Emulsion Flow, a solvent extraction technology developed by EFT, can recover rare metals efficiently at low cost and is expected to contribute to more efficient, lower cost recycling.

KDDI has been promoting recycling efforts by collecting customers' unwanted mobile phones, including smartphones, and manually disassembling them into their component parts. In such efforts, we have maintained a material recycling rate of 99.8%. In collaboration with EFT and other partners, we plan to demonstrate the feasibility of horizontal recycling of the rare metals contained in LIBs for mobile phones and other products to be recycled as battery materials.



< Emulsion Flow Technology >

■ Food Loss Reduction

au Commerce & Life is offering "Shopping with a purpose" on its comprehensive shopping site "au PAY Market" as an initiative to reduce loss products that are discarded for reasons other than quality and to solve environmental problems! Selection of products with special circumstances" is available on the "[au PAY Market](#)," a comprehensive shopping site operated by au Commerce & Life.

The au PAY Market proposes a solution to the world's overflowing "mottainai" (wastefulness) through shopping by offering discount prices on daily necessities that are discarded for reasons other than quality, such as food that can still be eaten but is thrown away or damaged packages. In addition to the special offers, free shipping and time sales will be held to make your shopping experience even more enjoyable and economical.



<Image of auPAY market website>

■ Endorsement of initiatives and group membership

Circular Partners

In December 2023, KDDI joined Circular Partners, a partnership designed to promote collaboration among industry, government, and academia with the aim of realizing a circular economy based on the "Growth-Oriented Resource Autonomous Economy Strategy" formulated in March 2023. Since it is difficult for individual companies to realize a circular economy by themselves, collaboration and expanded efforts by all parties involved are required throughout the lifecycle, and Circular Partners is part of this effort.

Through its membership in Circular Partners, KDDI aims to realize a circular society.