

# Casio Green Star Plan

## Positioning of the Casio Green Star Plan

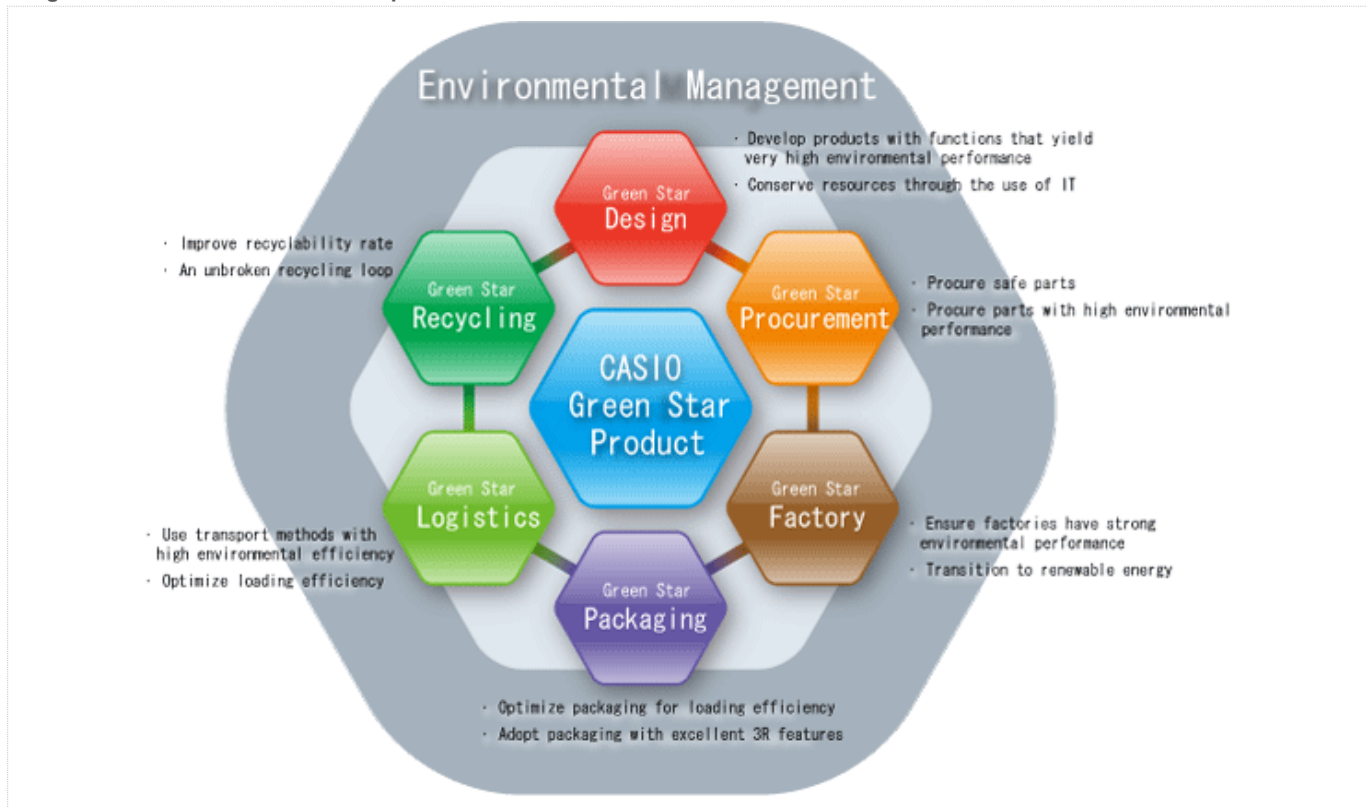
The Casio Green Star Plan is the title of the Casio group's environmental action guidelines formulated based on the Casio Green Star concept under the Casio Environmental Vision 2050 and the Casio Environmental Declaration 2020. The Casio Environmental Action Plan sets numerical targets and implementation deadlines based on the Casio Green Star Plan.



## Casio Green Star Concept

The Casio Green Star concept establishes high numerical targets for each stage of the product lifecycle including design, procurement, manufacturing, packaging, logistics and recycling, to promote environmental action. Moreover, Casio will continue to manage each of these stages across its circular platform for environmental management for the entire lifecycle. New Green Star products will be created through these activities.

Image: The Casio Green Star Concept



## Objectives, Environmental Management Guidelines and Specific Details for Each Lifecycle Stage

### • Green Star Design

Area		Policies
Next-generation environmental technology	1. Pursuing development of environmental technology	1-1. Develop technology for next-generation, energy-saving devices 1-2. Develop alternative materials technology for rare metals, etc.
Next-generation eco-products and services	2. Planning and developing next-generation Green Star products	2-1. Plan and develop next-generation Green Star products 2-2. Be conscious of 100% reutilization in planning and developing products with top class resource productivity and consciousness
New businesses	3. Creating environmental businesses	3-1. Take initiatives in research and development of new energy (renewable energy)
Energy conservation	4. Developing products with low power consumption	4-1. Develop products with best energy consumption efficiency compared to competitors' products in same category
Resource conservation	5. Creating compact, slim, lightweight products with standardized components and durability	5-1. Promote development of the most compact, lightweight products compared to competitors' products in the same category without compromising function and operability
Environmental labels	6. Promoting acquisition of Type I, II and III environmental labels	6-1. Work to develop Green Star products 6-2. Aim to expand acquisition of Type I and Type III environmental labels
Reduce, reuse, recycle	7. Increasing the usage rate of plant-derived resources (non-fossil materials)	7-1. Increase the usage rate of green plastic (biodegradable plastic) 7-2. Consider introduction of bioplastic
	8. Promoting reduce, reuse, recycle design	8-1. Aim to formulate and adopt 3R design standards
Safety	9. Prohibiting and reducing use of specified toxic substances in purchased goods (finished goods, components, materials, paint, ink)	9-1. Consider vinyl chloride-less and look into introducing alternative materials
Product performance	10. Evaluating product performance data and indirect CO <sub>2</sub> emissions volume (Scope 3)	10-1. Expand scope of collection for product environmental performance data
Eco-design	11. Improving environmental compatibility	11-1. Carry out investigation aimed at group-wide adoption of eco-efficiency assessment methods using life cycle assessment (LCA) 11-2. Make preparations toward introduction of carbon footprint 11-3. Expand carbon offsets with the aim of reducing environmental impact of product lifecycle
	12. Assessing environmental impact on water	12-1. Make preparations with the aim of introducing water footprint
Information disclosure	13. Disclosing environmental specifications	13-1. Describe environmentally-friendly specifications in catalogues, instruction manuals, packing boxes, etc.

• Green Star Procurement

Area		Policies
SCM/Supplier Support	1. Supporting CSR provisions at suppliers and business partners, including environmental policy	1-1. Provide personnel, technical and financial assistance when suppliers and business partners carry out technical support and capital investment connected to environmental conservation related to goods delivered to and manufacturing for Casio
Green procurement	2. Promoting green procurement	2-1. Promote procurement of green components from green suppliers based on the Casio Group Green Procurement Standards 2-2. Conduct on-site surveys and inspections concerning the usage of toxic substances in accordance with Casio standards

• Green Star Factory

Area		Policies
Preventing - Destruction of the ozone layer - Atmospheric pollution - Water contamination - Soil contamination - Climate change, etc.	1. Phase out use of alternative CFCs, chlorine-based solvents and greenhouse gases	1-1. Reduce use of CO <sub>2</sub> , methane, dinitrogen monoxide, HFC, PFC and SF <sub>6</sub> 1-2. Replace HFC-134a used in dust blowers, etc., with products that use chemicals with a lower global warming potential (GWP) 1-3. Take care with handling of volatile organic compounds (VOCs) to prevent dispersal into the atmosphere
	2. Adopting renewable energy	2-1. Introduce renewable energy sources such as wind power and solar power

• Green Star Packaging

Area		Policies
Reduction in total mass of packaging	1. Reducing total mass of packaging and packing materials in logistics process	1-1. Design packaging with consideration for shock resistance and reducing volume and weight of product packaging, taking into account loading efficiency in logistics 1-2. Promote reduction in total mass of delivery packaging materials for procured components and materials 1-3. Promote reduction in total mass of packaging materials for transfer of materials and semi-finished goods between plants 1-4. Promote reduction in total volume of valuable materials such as packaging as a proportion of total waste volume 1-5. Create cooperation framework for reducing mass of packing and packaging in partnership with suppliers, etc.
Safety	2. Safety of materials	2-1. Comply with regulation of toxic substances in packaging materials based on Green Procurement Standards

• Green Star Logistics

Area		Policies
Environmental impact management in logistics	1. Managing environmental impact in logistics, taking measures against climate change (CO2 reduction) and assess indirect CO2 emissions (Scope 3)	1-1. Promote management of environmental impact across the entire logistics process in and outside Japan (procured materials logistics, production logistics, product logistics, sales logistics and collection logistics) 1-2. Identify moving mass (ton-km) for each process in the Group on a consolidated basis and aim to reduce total amount of CO2 emissions 1-3. Promote benchmark for measurement of CO2 emissions volume and standardization of conversion values
	2. Conserving energy in logistics and measures to prevent climate change	2-1. Improve innovation in transport systems - Switch to transport by rail and shipping, which offer good transport efficiency and low CO2 emissions - Improve innovation in loading methods and delivery routes to enhance transport efficiency 2-2. Introduce fuel-efficient company cars, commercial vehicles and delivery vehicles
	3. Increasing rate of modal shift * Rate of modal shift: ratio of total transport volume accounted for by rail and shipping	3-1. Increase the rate of modal shift in order to reduce environmental impact of logistics taking product characteristics into account

• Green Star Recycling

Area		Policies
Collection and recycling	1. Promoting collection and recycling of small appliances	1-1. Pursue ease of dismantling and expand use of recycled material aimed at introducing the collection and recycling system for small appliances being promoted by the Ministry of the Environment and the Ministry of Economy, Trade and Industry
	2. Promoting the collection, recycling and reuse of used goods and consumables	2-1. Promote collection and recycling of equipment for corporates and expand the range of products covered by programs 2-2. Promote collection and recycling of consumables and expand the range of products covered by programs