

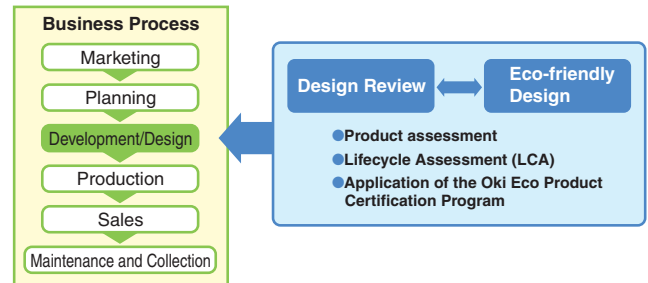


Product-related Environmental Response

Product Assessment

Operation of Product Assessment

To reduce the environmental impact of a product from the development/design phase, we need to assess the environmental impact — energy and resource conservation, recyclability, reduction of chemical substances, and others — throughout the lifecycle of the product, and to act on the results. The Oki group works to reduce the environmental impact of its products by conducting product assessment or Lifecycle Assessment (LCA), and also by running the “Oki Eco Product Certification Program”.



Product assessment is a system to ease the environmental impact of a product by comparing the “model to be designed” with a “reference model” (the previous model, etc.) with respect to established evaluation items (for example, energy conservation, resource conservation, recyclability), and repeating the design process until the judgment criteria are cleared. Evaluation items and judgment criteria are determined separately for each segment — information processing equipment, printers, telecommunications equipment, and so forth — to ensure that the assessment fits the characteristics of the product. The following presents an example of the main evaluation items and criteria for telecommunications equipment. The Oki group introduced a product assessment scheme in fiscal 1995.

● Main Evaluation Items and Judgment Criteria for Telecommunications Equipment

Product Body



IPstage*BV1270

Evaluation Items		Judgment Criteria (Comparison with Reference Model)
Energy conservation	Energy consumption during operation and in stand-by mode	Reduction of power consumption
		Compliance with energy conservation laws and the International Energy Star Program
		Employment of power management functions
Resource conservation	Making smaller and lighter products	Reduce product volume and mass
	Use of recycled resources, etc.	Increased use of recycled resources (recycled plastic, etc.)
Recyclability	Potential for recycling, such as by reuse or resource recovery	Increase of recyclability = mass of recyclable resources/mass of product itself x 100
Ease of product dismantling	Making it easier to dismantle, collect and transport the product	Reduction of maximum volume and maximum size of dismantled product
	Structure that allows easy dismantling of product and separation of materials	Reduction of the number of required tools and special tool types (reduction of special screws and nuts, etc.)
	Separability of materials	Easiness of removing batteries
Making products with a longer life	Support for version upgrades	Reduction of the types of material
		Easiness of separating product into single materials (indicate material type)
Reduction of chemical substances contained	Preventing environmental pollution during use and disposal	Adaptability through exchange of packages or download functions
		Increased reduction ratio of environmental pollutants contained in products
		Adequate instructions on treatment in case these substances are contained

Packaging



Package carton of the IPstage*BV1270

Evaluation Items		Judgment Criteria (Comparison with Reference Model)
Resource conservation	Reduced quantity of material used	Reduce used quantities of wood (including plywood), corrugated cardboard (raw material for paper)
		Reduce the number of nails and staples
		Reduce the used quantities of foam material, resin boards, and other sheets
	Making the packages smaller	Reduce the ratio of vacant space in packages = (Total volume – product volume) / Total volume x 100
Recyclability	Promotion of resource recovery	Reduce the number of parts that do not allow resource recovery
	Promotion of reuse	Use of recycled paper from corrugated cardboard
Reduction of chemical substances contained	Control of the generation of hazardous substances	Do not use environmental pollutants
Collectability	Easiness of material separation	Reduce the number of points where different materials are joined
Disposability	Disposability	Make it possible to fold and crush package for disposal
		Indication of material type



Product-related Environmental Response

Lifecycle Assessment (LCA)

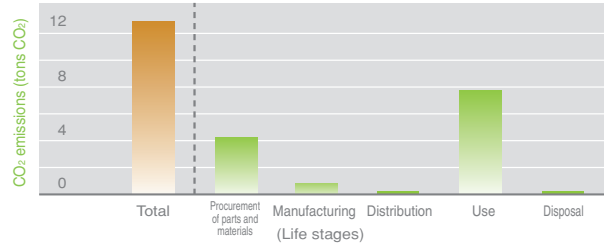
●LCA Evaluation

LCA is a method of evaluating effects on the environment by quantifying flows of material and energy throughout the lifecycle of a product from production up to its disposal in a comprehensive way. It is an effective technique to grasp the environmental impact of a product throughout its lifecycle. Up to now, we have assessed Automated Teller Machines (ATM), printers and other products. When comparing CO₂ emissions, we found that, in every case, the environmental impact is the largest during the stage of usage by the customer. The LCA results are used as a tool for eco-friendly design.

LCA Example ① ATM



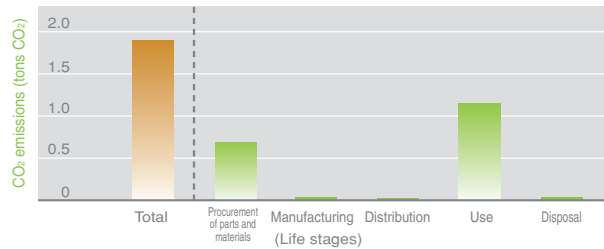
●Analysis Results



LCA Example ② Printers



●Analysis Results



Oki Eco Products

●Oki Eco Product Certification Program

Oki has been operating the “Oki Eco Product Certification Program” since fiscal 2001 in order to provide customers with products that are friendly to the environment. The “Oki Eco Product Certification Program” internally certifies products that meet Oki's original environment standards as “Oki Eco Products”. The program also provides the customer with environmental information on the product. Certified products bear a symbol mark in catalogs or user manuals, and are published on the Internet together with the certification standards. Products that satisfy both the standards common to all products (common corporate standards) and the individual standards that incorporate characteristics specific to each product (product family standards) are certified as “Oki Eco Products.”

●Flow until Oki Eco Product Certification

Common Corporate Standards

- Resource conservation
- Recyclability
- Energy conservation
- Restriction of hazardous substances
- Advance assessment
- Collection and recycling of used products
- Statement of precautions for disposal as waste

Product Family Standards

- Specific standards depending on the product segment and family
- Information processing equipment
- Printers
- Telecommunications equipment (Electronic devices are not applicable)

Certification if both standards are satisfied



Symbol Mark