

We consider how to recycle resources by reducing, re-using and recycling, right from the product development phase.

Our Approach

To achieve a socio-economic system based on sound material cycles—a system that strives towards harmony with the environment—corporations must work to reform the existing system and move away from the “mass production, mass consumption, mass disposal” model towards an “optimal production, optimal consumption and minimum disposal” model. Konica Minolta has established a new environmental policy that aims towards this goal, and continues to create environmentally sound products.

Results and Future Goals

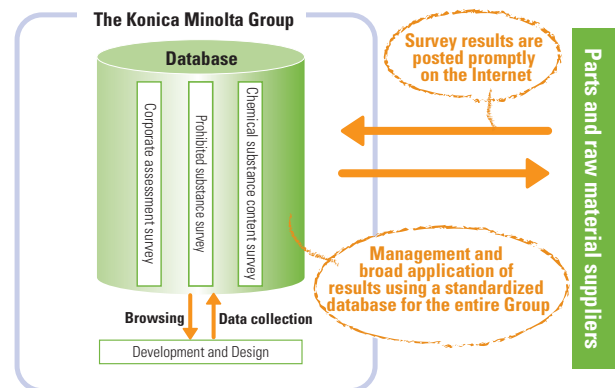
We have introduced the practice of carrying out Life Cycle Assessments (LCA), which gauge a product’s total environmental impacts from the product development phase and consider the product’s contribution to a socio-economic system with sound material-cycles, to preventing global warming, to eliminating hazardous chemical releases. We have also introduced this style of product development—known as Design for Environment (DfE)—into our Image Information equipments like copiers. In the future we aim to expand this approach to all product domains.

Konica Minolta's approach Consider the environment throughout our global operations and through the entire product life cycle.

1 We are working to expand our green procurement system globally.

In order to offer a truly environmentally sound product, we must be able to verify the quality of the raw materials and parts that go into that product. Every company in the Konica Minolta Group now carries out green procurement that gives priority to parts and raw materials with low environmental impacts. We have added Environment (E) as one of our standards, together with Quality (Q), Cost (C), and Delivery time (D), for comprehensively evaluating items for procurement. We implement two evaluation processes to verify the parts and raw materials we procure in and outside Japan. One is “Supplier Evaluation”, which evaluates the supplier itself, and the other is “Materials Evaluation”, which evaluates the materials included in the raw materials and parts. In order to promote reliable and effective green procurement, we will be conducting explanatory meetings with the suppliers in the countries and regions around the world, managing an information database and striving for internal sharing of information.

Utilizing the Green Procurement System

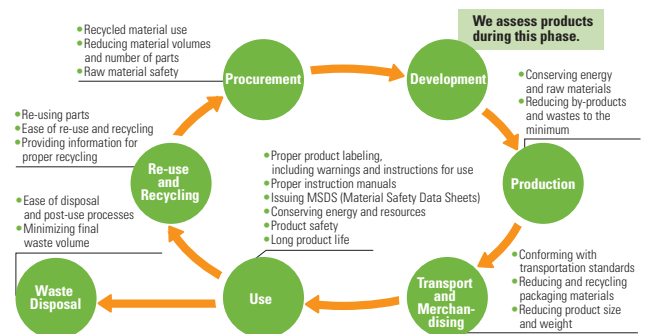


This is a system for procuring parts for machine products, which uses component materials survey methods recommended by the Japan Green Procurement Survey Standardization Initiative (JGPSSI).

2 Setting our sights on the entire product life cycle, we check for possible environmental impacts before developing a product.

Konica Minolta carries out product assessments for all products. Product assessment is a method for strictly checking in advance, at the planning and design phase, the environmental load that will be imposed by a product throughout its entire life cycle. At the planning phase for new products, numerical targets for environmental goals are set for standard product assessment evaluation items. During the testing phase, we check whether goals are being met and carry out a final assessment before going into production. Only products that meet the goals go into the market.

Product Life Cycle and Assessment

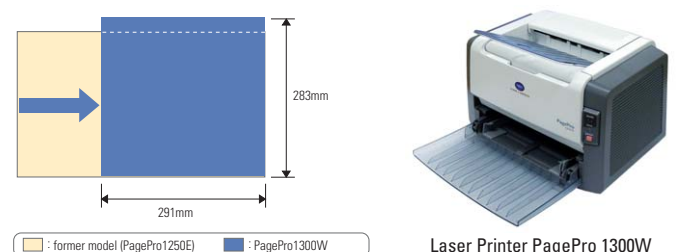


Resource Conservation through Designing

Minimal use of resources—the key to resource recycling

Reducing the size and weight of products leads to resource conservation in manufacturing, energy conservation in shipping and a lighter environmental burden from waste disposal. The new PagePro 1300W laser printer brought out in February 2004 is 28 percent smaller and 13 percent lighter than the former model (brought out in August 2002).

Comparison of PagePro 1300W dimensions with the former model (side view)



Case Study: Single-Use Cameras

Product design for re-use and recycling by standardizing parts and materials

When our single-use cameras are collected after use, they are sorted, dismantled and the parts inspected before being re-used or recycled. The re-use rate for parts scores about 90 percent, and if recycling is included, the rate is almost 100 percent.

■ Keeping recycling in mind – standardizing parts and materials

Except for the front cover and flash unit, standardized parts are now used for all models in the single-use camera, making them easier to re-use or recycle. To make recycling even easier, we have standardized materials as much as possible, for example by using the same kinds of polystyrene resins wherever plastic resins are used, except in the lens and flash unit panel.

Further enhancing re-use and recycling potential by designing with standardized parts

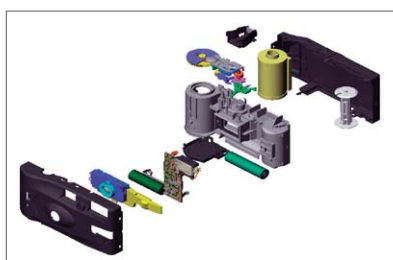
NEO ps 800	Goody 800	Goody BEST	Part
			Front cover
			Flash switch
			Flash unit
			Body unit
			Lens unit
			Spool
			Back cover

Standard parts

Standardized design for the single-use camera series (in the Japanese market)

■ Applying modular design, with re-use in mind

We use several module designs to increase the efficiency of disassembling, testing and reassembling parts that are being re-used. Thus, the product does not need to be completely disassembled, but into modular units, increasing efficiency.



Modular design for the single-use camera series

Other measures

Product Packaging Reduction

We are now selling “color film for business use” in simplified packaging on a trial basis. We have replaced the plastic canister with non-bulky polypropylene film wrapping, and no longer put each roll in its own box. We are using recyclable corrugated board for the outer box as well. As a result, volume has been reduced to two thirds, and packaging waste to one fifth of the original.



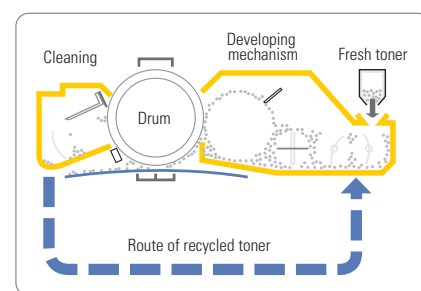
Case Study: Digital Multi-Function Devices

Standardizing design for re-use and recycling to create products for a society with sound material cycles

To facilitate the re-use of parts and materials from end-of-life products, we have formulated “Manual on Design for Recycling” and checklist to standardize designs for recycling.

■ Internal re-use of toner

Our original technology, the Toner Recycling System, collects, recycles, and re-uses toner that is not transferred to the paper in the process of making a copy. Without this system, about 20 percent of the toner put into a copier goes to waste and is collected by service personnel during maintenance, but with this system, toner waste at the customer site is reduced to zero.



Our original toner recycling system

■ Standards for re-use: Parts standardization

In order to re-use parts from end-of-life products, new products should be capable of using the same types of parts as in old products. In designing new products, therefore, we promote re-use by adopting designs that employ “standard re-usable parts” such as motors, that can be used even in next-generation products.

■ Uniformity in outer casing plastics promotes closed material recycling

All outer casing parts of all multi-function devices are made of the same types of PC-ABS (polycarbonate acrylonitrile-butadiene-styrene) or PC-PS (poly carbonate-polystyrene) plastics in order to promote closed material recycling by recycling plastics from end-of-life multi-functional devices and using them in the manufacture of new ones. We were among the first in the industry to begin working to eliminate brominated flame retardants and antimony trioxide, and to globally expand the use of standardized plastic.



Outer casing parts made of PC-ABS



Green Procurement in China

The country’s rapid economic growth and large population exacerbate environmental problems in China. China’s natural capital is being depleted at an alarming rate. The difference between China and Japan is that in China, values regarding environmental protection are still in the developing stage, it is relatively difficult to involve people to be actively engaged in our Green Procurement. With increasing managerial knowledge of and attitudes toward technological change and environmental concern in China, I hope our company’s environmental performance will keep on improving together with our business partners in the future.
(Lily Yu, Procurement Control Department, Konica Minolta Consulting (Shenzhen) Co., Ltd.)