



KONICA MINOLTA

# ENVIRONMENTAL

## ✦ Konica Minolta's green contribution

**Konica Minolta, a leading manufacturer of printing technologies, sees the protection of the environment as an essential part of its corporate management philosophy summed up in its Eco Vision 2050.**

The Eco Vision 2050 was formulated to express the company's long-term environmental vision, establishing a number of goals and guidelines, charting a course to achieve future objectives and in so doing meet its responsibilities as a globally present business enterprise by helping to establish and contribute towards sustaining the earth, its environment and human society. Such achievements are, for example, acting to prevent global warming, ensuring that finite global resources are used effectively, including reuse, as well as supporting the preservation and restoration of the planet's biodiversity. It is a corporate conviction that technological innovation is the driving force which provides the means for achieving sustainable business development while at the same time reducing the impact of manufacturing on the environment and being able to offer innovative products with improved eco-performance.



# ECO VISION 2050 – FOR A SUSTAINABLE EARTH AND SOCIETY

**In a nutshell, what is good for the environment is good for one's green conscience and can also save money.**

One of the most straightforward ways of underlining the results of Konica Minolta's efforts, technologies, functions and features, which all play their part in ensuring that all products comply with environmental laws and regulations, both local and global, is to look at the many certificates which the company has applied for and been awarded:

**Blue Angel, Energy Star, ISO 14001, ROHS.**



- 1 **Reduce CO<sub>2</sub> emissions by 80% from fiscal 2005 levels throughout product life cycles by 2050**
- 2 **Aim to reuse and maximise the effective use of the Earth's limited resources**
- 3 **Work to promote the restoration and preservation of biodiversity**

**“Konica Minolta's management philosophy is the Creation of New Value.”**

“This does not just mean creating new products with innovative features never seen before. The “new value” that is part of our mission also means new ways of caring for the environment.”

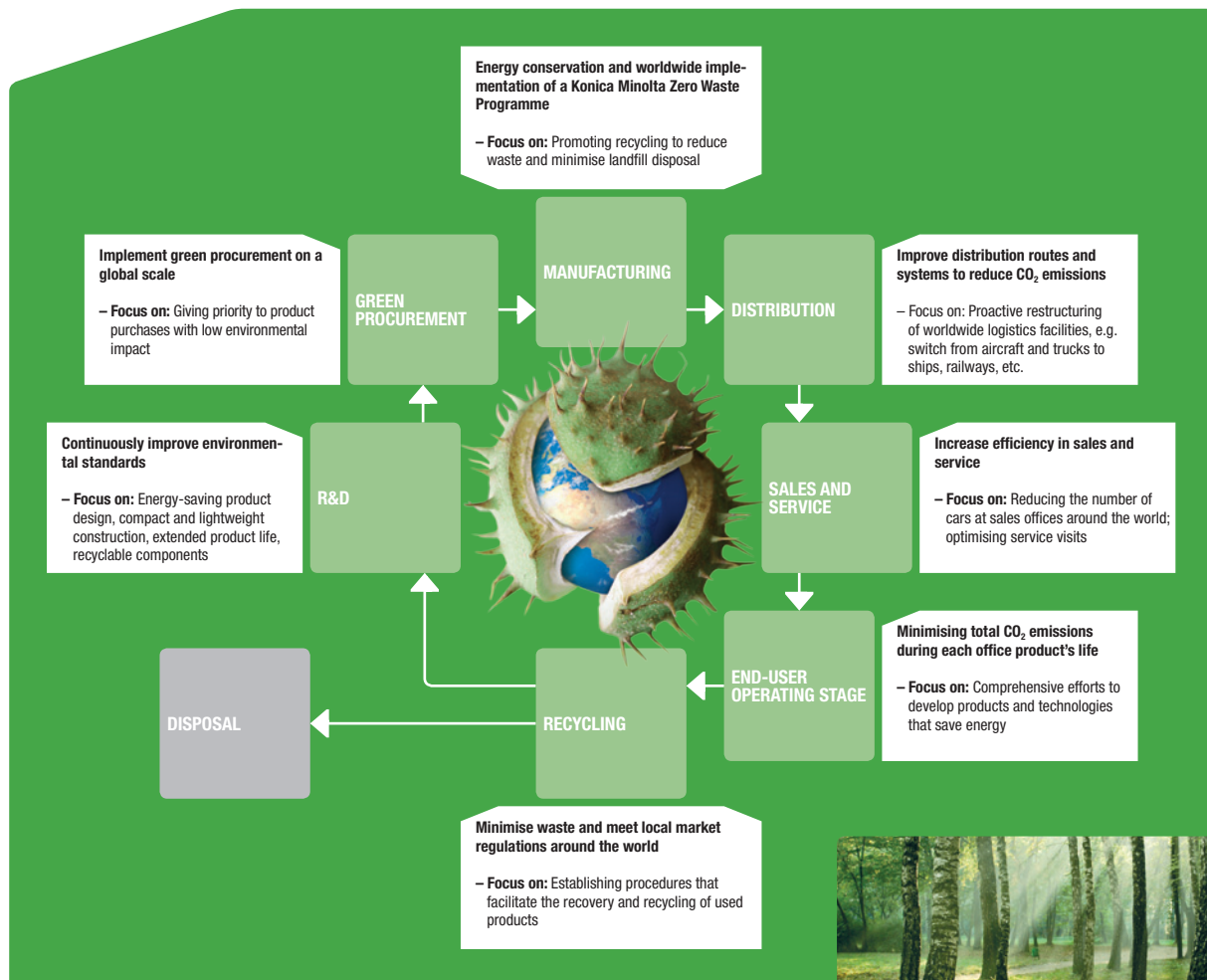
Masatoshi Matzusaki  
President and CEO, Konica Minolta Holdings, Inc.





# PRODUCT LIFECYCLE

The actual process of integrating environmental aspects and considerations into a product, like a Konica Minolta MFP, is one involving many steps. Step one is the research and development of new products and services, continuing through many and various internal processes, bringing together both supplier and customer chains and coming full circle with the recycling of used devices.



# GREEN TECHNOLOGIES

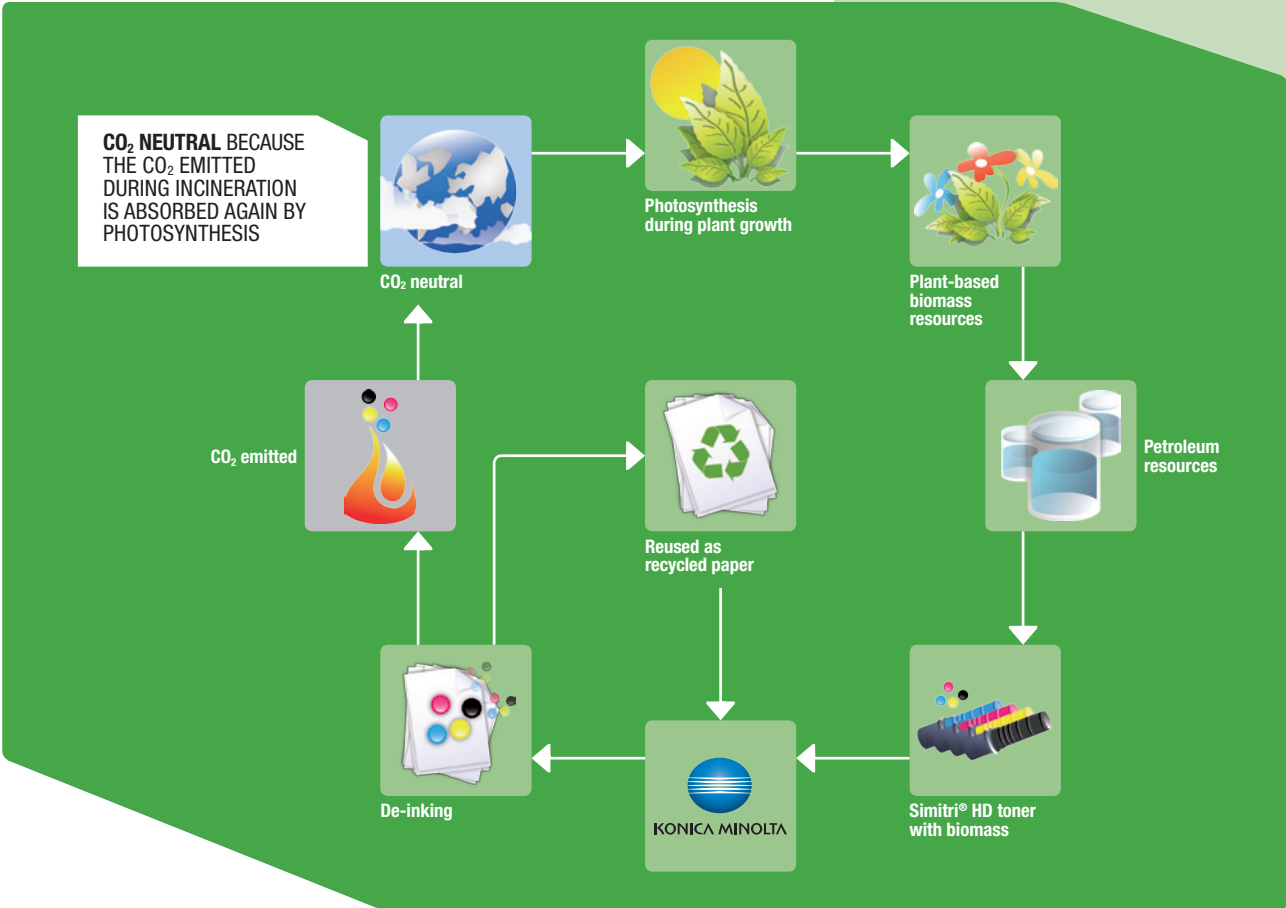
The devices provided by Konica Minolta come as standard with many refined and fully fledged technologies which are able to conserve and preserve the environment.

## ✔ Simitri® HD polymerised toner

- Simitri® HD toner is made using materials which include biomass. This contributes to achieving CO<sub>2</sub> neutrality during recycling and helps reduce the overall carbon footprint of Simitri® HD and, consequently, of Konica Minolta office devices.
- The biomass in Simitri® HD toner is a plant-based resource comprising biological materials and is as such able to reduce the environmental impact during the three phases of production, use and recycling.

- The polymerised Simitri® HD toner itself reduces CO<sub>2</sub> not only during the production process, but also during actual use because it has a lower fusing temperature. The fuser doesn't need to be heated as high and therefore has lower energy consumption. The polymerised toner particles themselves are actually smaller than those produced by conventional (pulverisation) methods and less toner is required for the same print job.
- De-inkability is a measure of how easily and well toner can be removed from paper during recycling. The standard test, the INGEDE test, demonstrates that Simitri® HD works especially well and is therefore a guarantee of effective paper recycling.

## ✔ Green toner life cycle





Induction heating fusing technology

This technology is integrated in several Konica Minolta devices. Induction heated fusing units are able to reach the specified fusing temperature much faster than units implementing conventional heating methods. This shorter warm-up period means less energy is required. It also means the temperature at which the fusing unit is maintained during stand-by mode can be lower and therefore the energy consumption can be reduced overall. Induction heating fusing technology is a suitable technology for greater energy efficiency.

Toner loop mechanism

The majority of Konica Minolta B/W devices are nowadays fitted with an efficient toner recycling system: not all toner is fused to the paper during the printing process; the toner loop mechanism collects, recycles and reuses the unused toner. This reuse of the toner not only helps improve cost efficiency but reduces toner consumption and in turn lowers CO<sub>2</sub> emissions.

Dynamic eco-timer

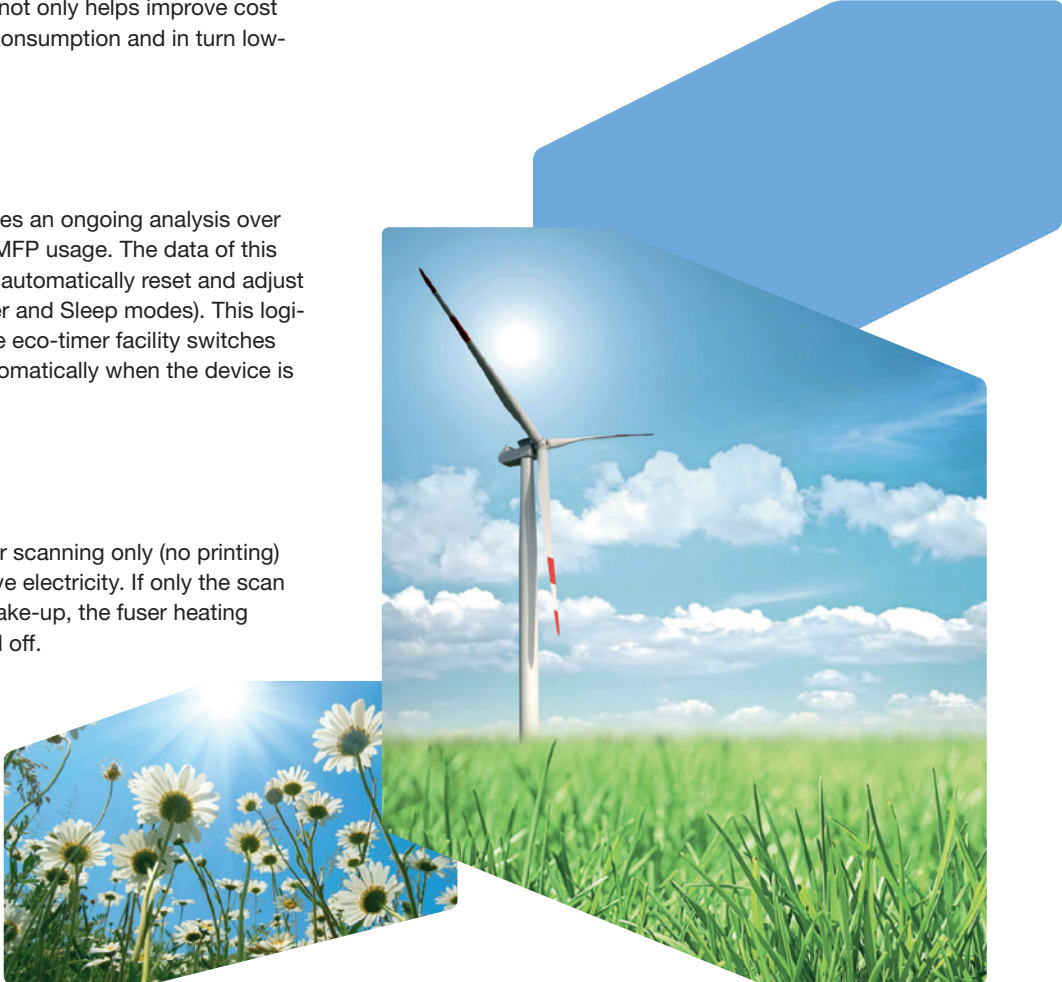
The dynamic eco-timer involves an ongoing analysis over a four-week period of actual MFP usage. The data of this four-week analysis is used to automatically reset and adjust system availability (Low Power and Sleep modes). This logical further development of the eco-timer facility switches the MFP into Sleep mode automatically when the device is not in use.

Eco-scan mode

Whenever the MFP is used for scanning only (no printing) the fuser is deactivated to save electricity. If only the scan function is to be used after wake-up, the fuser heating system is simply left switched off.

Low TEC value

- The TEC value (typical electricity consumption) is the key metric to classify and judge energy consumption. It indicates an electrical product's typical electricity consumption over a one-week period, whereby the calculations are based on average office usage.
- The value is calculated according to standardised measurement criteria and is therefore not manufacturer-specific i.e. independent. Compared with virtually all other systems, those of Konica Minolta boast very low TEC values and can deliver the greatest energy savings.
- The Energy Star certificate is awarded on the basis of the TEC value. Customers who buy equipment based on the Energy Star certificate can expect reduced running costs and play their part in helping to protect the environment.



# GREEN FUNCTIONALITIES

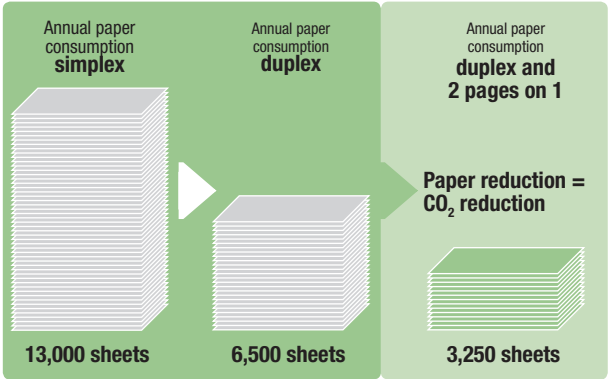
Konica Minolta office products can implement a range of features which come into play by helping to save paper, increase productivity and reduce printing costs.

## ✓ Duplex printing/copying

For obvious reasons printing/copying on both sides of a sheet of paper helps save paper, and save money. The example in the graphic assumes a copy/print volume of 250 pages per week. Duplex printing and copying can help save up to 6,500 sheets per year, the equivalent of 13 reams of paper at 500 sheets per ream.



Duplex printing/copying



Based on a weekly consumption of 250 sheets





**N-up printing/copying**

Activating the N-up printing and copying option saves paper by combining several pages of a document onto a single sheet. It has the added benefit of providing a better overview and is also suitable for draft documents: printing fewer sheets of paper helps save toner and paper.



N-up printing and copying

**Proof print & proof copy**

The proof print & proof copy function is available on most Konica Minolta devices. Before multiple sets of a document are printed, e.g. a presentation handout, one proof set is printed first and can be checked before printing the remainder. If no corrections are necessary the rest of the job can then be produced quickly as the print data has already been processed. This option is able to prevent unnecessary wastage of paper and toner.

**Print and copy preview**

This functionality presents a preview of the print and copy on screen before printing, either in the print driver on the PC monitor or directly on the MFP display during copying. This is an effective way of avoiding misprints and hence wastage.

**Skip blank pages**

Documents often contain blank pages. Blank pages are used for example to ensure that chapters always start on a right-hand page. In order to avoid blank pages passing through the print mechanism and wasting paper, the device can be set to skip blank pages automatically.



Eco-meter

**Eco-meter**

The eco-meter is a counter to display eco-usage and power consumption. The display presents a clear visualisation of environmentally related topics, for example the duplex print ratio, and is displayed directly on the MFP panel. The objective is to provide a clear display of this ecological data, and so enhance awareness of better, environment-friendly MFP usage.





# GREEN CERTIFICATES

Konica Minolta puts a lot of effort, time and resources into a wide range of technologies, functions and features all with the same goal: that all products are compliant with the environmental laws and regulations in all parts of the globe. The key global certificates are: Blue Angel, Energy Star, ISO 14001, ROHS.

## Blue Angel

The Blue Angel is the world's first environmental labelling system: it is awarded to products and services that have a reduced environmental impact.



## Energy Star

Only office equipment which satisfies set standards for energy saving is awarded the Energy Star. The key decision criterion is the TEC value.



## ISO 14001

ISO 14001 is the internationally recognised environmental management standard. Konica Minolta operates a management system compliant with ISO 14001: its management system was long ago adopted as its basic policy for all group production sites across the globe, and all of these facilities have been awarded the ISO 14001 certificate.



## RoHS (Restriction of Hazardous Substances)

RoHS is a directive which restricts the use of six hazardous substances in the manufacture of a wide range of specified electrical and electronic equipment. RoHS is closely linked with the WEEE (Waste Electrical and Electronic Equipment) Directive which specifies targets for the collection, recycling and recovery of electrical goods and is part of a package of legislative initiatives seeking to deal with and ultimately solve the problem of huge amounts of toxic e-waste currently being generated.



**Konica Minolta is absolutely and demonstrably committed to RoHS: the company has taken the further step of avoiding the use of substances listed as RoHS-designated in all of its office products.**