



We will do everything possible
to preserve our one and only earth.



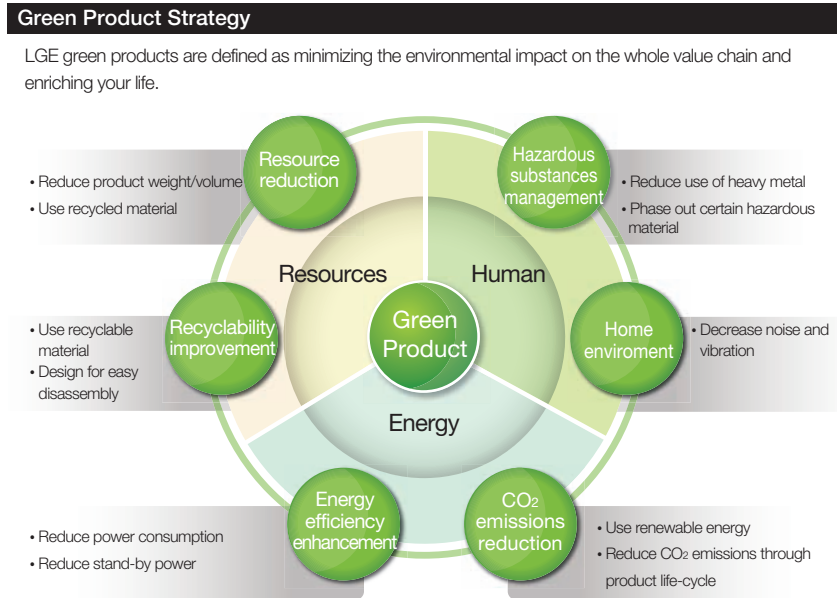
A woman and a man, both wearing white lab coats and safety goggles, are smiling and holding a large white sign. The sign has the text "GREEN Product Strategy" written on it in blue. The background is white with stylized illustrations of a sun, a rainbow, buildings, and laboratory glassware.

**GREEN Product
Strategy**

LG Electronics established a strategy and systematic process for manufacturing greener products.

Green Product Strategy Direction

The objective of LG Electronics' green product strategy is to minimize the environmental impact on the whole value chain while enriching lives. The strategy consists of three components; energy, human and resources. The strategy is based on a model that takes into consideration high energy efficiency, a reduction in raw material usage, and human welfare.



● Energy

LG Electronics' energy strategy has been divided into two areas of emphasis: substantially enhancing product energy efficiency and reducing greenhouse gas emissions during the manufacturing process. By enhancing energy efficiency, we are working to reduce changes in the climate and provide actual economic benefits to our customers. We are trying to do our part as a global company to help protect the environment for future generations by engaging in activities that potentially reduce greenhouse gas emissions during the entire manufacturing process.

● Resources

Our resource strategy involves significantly reducing our resource usage and enhancing the recyclability of the resources that we do use. This strategy is intended to reduce the amount of new resources that are used by decreasing the size and volume of the product and utilizing recycled materials when possible. We are also working to simplify the structure of the product components so that it is easier to recycle once it is discarded. This strategy is part of our efforts to establish sustainable resource usage while increasing the ease of recycling.

- Human

LG Electronics continues to substitute hazardous substances with non-hazardous substances when possible. We have also incorporated technologies that potentially reduce allergens into some of our products

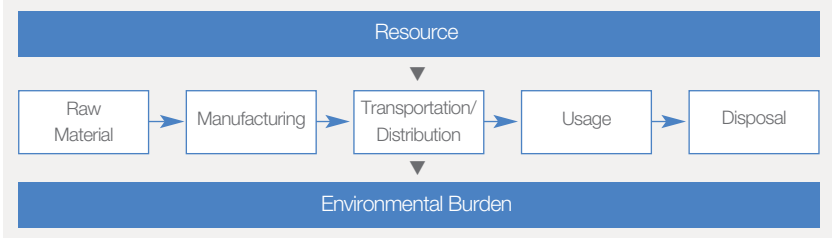
Eco Design

Eco design aims to improve the environmental performance of products throughout the product's life cycle by considering the environmental effects of the product early in its design.



• Eco Design IT System

Value Chain

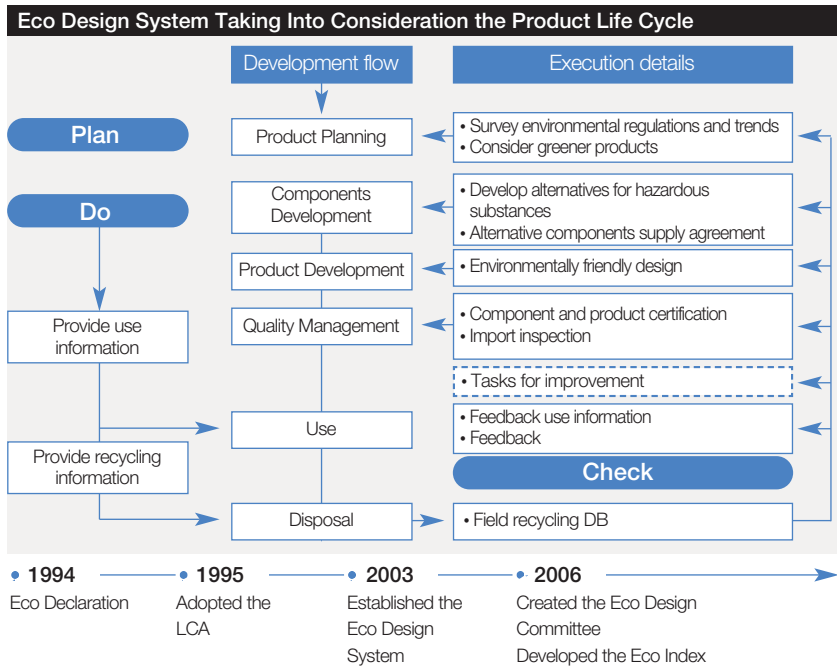


Eco Design

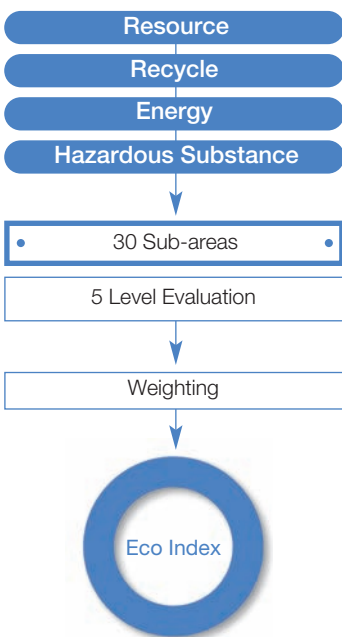
Eco design systems and energy efficiency rates are two of the requirements of the Energy Using Product Directive (EuP) in the EU. LG Electronics has always worked to enhance the energy efficiency of its products as a way to help preserve the environment and meet the needs of its customers. In addition to complying with the EuP, LG Electronics has developed its own targets and strategies in an attempt to further reduce total energy consumption and the amount of standby power used by products. LG Electronics takes into consideration the further enhancement of recyclability, reduction of resource depletion, and substitution of hazardous substances when developing its products.

● Life Cycle Assessment

LG Electronics adopted the Life Cycle Assessment (LCA) in 1995 as a way to develop more eco-friendly designs. Using the LCA, specialists assess and evaluate the environmental impact of a product beginning in the product development stage and continuing through the manufacturing stage. The LCA is intended to identify potential problems so they can be solved before progressing to the next stage of development.



Eco Index Assessment & Index Flow Chart



● Eco Index

LG Electronics has developed a proprietary Eco Index (divided into thirty sub-categories) that is used to quantify a product's eco design level and determine its eco performance. We intend to revise the Eco Index to take into consideration new technological developments, as they become known. The index is also used as criteria for the LGE Eco Mark Certification. For more information on the Eco Mark Certification, see page 64.

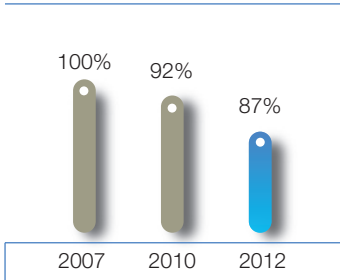
Eco Index

Scope	Detailed Category (Total 30)
Resource Depletion	Reduction of Weight, Volume, etc.
Recycling	Recyclable Weight, Frame Structure
Hazardous Substances	Substitution of PVC/BFR, Reduction of VOC
Energy	Standby Power, Greenhouse Gas Emissions, etc.
Other	Packaging Material, Noise, etc.

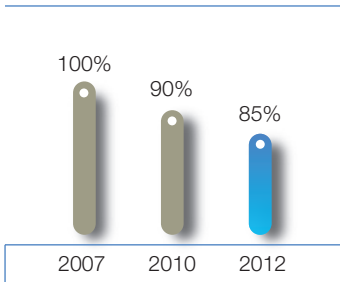
* The allotment of points by scope may change based on the characteristics of the product group.

Targets for Enhancing Energy Efficiency of Major Products

TV power consumption



Air Conditioner, Refrigerator power consumption



Global warming is partially a result of excess emissions of greenhouse gases. Global warming will likely reduce biodiversity, impact weather patterns causing regional heat waves, droughts, and floods, and raise the sea level. LG Electronics is sensitive to the impact of global warming and the excessive emission of greenhouse gases. As such, we are attempting to reduce the amount of greenhouse gases emitted as a result of the operational activities of our company. LG Electronics is also attempting to develop more energy efficient products. By reducing the amount of energy used by its products, LGE hopes that this increased energy efficiency will potentially reduce greenhouse gas emissions during the use of the product.

Energy Efficiency Enhancement

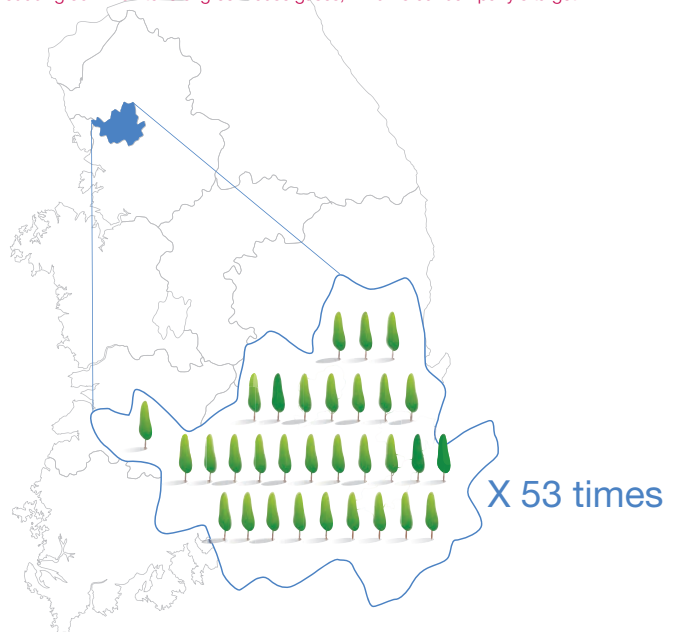
It is LG Electronics' goal to enhance the energy efficiency for all of its major products by about 15% from 2007 levels through systematic long-term investments into research and development. We have also established a target to reduce greenhouse gas emissions by 3,000,000 tons by 2020. These efforts are estimated to have the same environmental impact as planting 9.6 billion Korean white pines (one-year-old plants) in an area approximately fifty-three times the size of Seoul, or about 30% the size of Korea.

* If 3,000 Korean white pine tree seedlings are planted in a 1 hectare area, 9.3 tons of greenhouse gases are absorbed (Source: Korea Forest Research Institute), Area of Seoul: 605 km²

● On-mode Energy Efficiency

LG Electronics has instituted a five-year technology road map for each of its products. We intend to achieve these energy efficient targets for each product by emphasizing energy efficiency improvements during development. By doing so, we intend to remain competitive while potentially reducing greenhouse gas emissions that result from the use of electricity.

* The effects of planting 9.6 billion Korean white pine seedlings in an area 53 times the size of Seoul is comparable to reducing 30 million tons of greenhouse gases, which is our company's target.



● Standby Power

Electronic products consume power not only when they are in use, but also when they are plugged-in and not in operation. This power consumption is referred to as standby power. According to data analyzed by the Korea Energy Management Company (KEMCO), 1.7% of the total power consumed in Korea in 2006 was standby power, which was equivalent to KRW 500 billion annually. LG Electronics target is to achieve less than 0.5W standby power for most of our products after 2010.

Standby Power Status and Target

Unit : W

Product	2008 Standards	After 10 Years
TV	0.3~0.9	0.1~0.5
DVD	0.6~0.8	~0.5
Microwave	0.8~1.5	~1.0
Mobile Phone Charger*	~0.3	~0.25
Monitor	0.5~0.9	0.1~0.5
Notebook PC	0.7~1.0	0.4~1.0
Washing Machine	0.3~0.9	0.3~0.5
Room Air Conditioner	0.3~1.0	0.2~0.5

* Only applicable for products made by LG Electronics.

● Energy/Carbon Label



LG Electronics is also working to produce higher energy efficient products in order to reduce the emission of greenhouse gases. As a part of its efforts, a substantial number of LGE products are "Energy Star" compliant in the U.S. and have received the "Energy Label" from Europe. The EU Energy Label is a rating of a product's energy efficiency levels. The "Energy Star" program is a program that was created in 1992 by the U.S. government to encourage the use and development of energy saving products.

● Energy Winner Award (2008)

In August 2008, our refrigerator (R-T686UHLW) received the Energy Grand Award at the "12th Energy Winners Award," which was sponsored by Consumer Korea (<http://www.cacpk.org>) and the Ministerial Award from the Ministry of Knowledge & Economy in Korea. Our air cleaner (LA-P210D) and microwave oven (MW-237PRS/ PWR) also received the Winner Award in the energy efficiency and standby power categories, respectively. These awards are given each year in recognition of energy-efficient products.



• Carbon Footprint Labeling

Greenhouse Gas Emission Reduction

LG Electronics attempts to make efforts that will result in a reduction in the amount of energy used during a product's life cycle. This reduction in energy usage will potentially reduce greenhouse gas emissions. For more information about GHG/Energy management in manufacturing, please see pages 55 - 57.

● Carbon Footprint Labeling

LG Electronics participated in a trial of the Carbon Footprint Labeling program organized by the Korean Ministry of Environment. The Carbon Footprint Labeling program is designed to allow companies to more easily disclose the eco-friendly characteristics of our products. The program also requires that manufacturers disclose to customers the total amount of greenhouse gases emitted during the entire product life cycle. By participating in the program, we were able to establish standards and processes for estimating greenhouse gases emitted during the entire product cycle of our new LG Electronics Steam Direct Drive washing machine model (FR 3228WA). In February 2009, our Steam Direct Drive washing machine was the first washing machine to receive the certification in Korea.

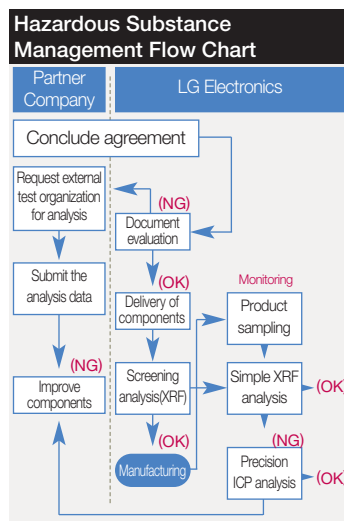
Time Table for Hazardous Substances Phase-Out in New Products

Substance	Product	Phase Out
PVC	Mobile	2010
	TV/MNT	2012
	Home Appliance/ Air Conditioner	2014
BFR	Mobile	2010
	TV/MNT	2012
Phthalates	Mobile	2012
	TV/MNT	2012
	Home Appliance/ Air Conditioner	2014
Antimony	Mobile	2012
	TV/MNT	2012
Beryllium	Mobile	BeO-non uses
	TV/MNT	2012

LG Electronics manages hazardous substances. We have also established a company-wide chemical material management system and a timeline to phase out the use of certain hazardous substances on all our new products. To achieve this, we have formed a network with our partner companies. Simultaneously, we also operate a hazardous substance information management system (HSMS) in an effort to effectively manage the use of hazardous substances jointly with our partner companies. Our target is to maximize customer satisfaction by not only reducing noise and vibration, but also by reducing the use of substances that may potentially cause allergies.

Hazardous Substance Management System

We are also working to reduce the use of hazardous substances by increasing our hazardous substances substitution technology, emphasizing the use of non-hazardous substances in component development when possible, and encouraging partner companies to reduce the use of hazardous substances in the supply chain. As a way to help assist in determining whether hazardous substances are included in the components delivered to our facilities, we have adopted the XRF (X-ray Fluorescence) system to screen components at all facilities. We also regularly monitor the components and products that have a high possibility of including hazardous substances.



Examples of Hazardous Substances Substitutions

Component	Improvements
Screw	Substituted the Coating Material (Cr6+ ► Cr3+)
Main PCB	SnPb ► SnAgCu
Coil	Eliminated Deca-BDE (brominated flame retardant)
Earphone Cable	PVC ► Substituted with the TPE*
Packaging Tray	General Plastic (Nylon 66i) ► Applied the Bio-plastic (PLA, Corn Starch)

* TPE : Thermo Plastic Elastomer

* XRF : X-ray Fluorescence Spectrometry
ICP : Inductively coupled plasma



• Hazardous Substance Information Management System (HSMS)



▲UL Certificate
◀TÜV Certificate

● Hazardous Substance Information Management System (HSMS)

LG Electronics operates a hazardous substance management system that requires partner companies to disclose data on their products and components, including an analysis of the homogenous quality materials. After reviewing this information, LG Electronics determines if the suppliers meet our high standards, including EU RoHS compliance.

● Operate a Hazardous Substance Precision Analysis Lab (Officially certified)

LG Electronics operates a hazardous substance analysis laboratory that is equipped with precision analysis equipment such as ICP, IC, GC-MS, HPLC, and a VOC Chamber. LG Electronics' laboratory was designated an official laboratory by TÜV Rheiland (Germany) and Underwriters Laboratory (U.S.). LG Electronics has established a hazardous substance management standard and instituted laboratory methods to analyze the ever-growing number of regulated substances. We also support measures to substitute hazardous substances and monitor high risk factors related to the level of hazardous substances contained in products or their components.

● Measures Taken by LG Electronics to Meet RoHS Requirements

The RoHS Directive went into effect in the EU in July 2006 and regulates the usage of the six major hazardous substances (Lead, Mercury, Cadmium, Hexavalent chromium, PBBs, PBDEs). Although many LG Electronics products were already in compliance with RoHS prior to its enactment, LG Electronics began an initiative in 2007 to make all of our products RoHS compliant, even in those jurisdictions where RoHS is not in effect. LG Electronics has also helped its supply chain partners implement internal systems that work to ensure their compliance with the RoHS Directive.

● Measures Taken by LG Electronics to Meet REACH Requirements

LG Electronics attempts to satisfy the criteria set forth under REACH (the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals) by monitoring the substances used in production. As an initial requirement of REACH, we investigate the substances that may be used in the final product. We also monitor the actions of our local branches and subsidiaries. If necessary, we also provide assistance to them. LG Electronics is actively taking measures to provide information on substances of very high concern (SVHCs) as well as to obtain permission and registration of their use, when necessary. By providing our partner companies with information and training courses related to REACH, we are able to manage all areas of the supply chain.

***REACH** : REACH took effect in June 2007 as a means to protect human health and the environment. REACH is an integration of various existing EU regulations related to chemical materials. According to REACH, all substances in excess of one ton produced or imported into the EU annually, are required to be registered and evaluated according to the tonnage and hazardous level. Companies are then required to obtain permission to either import the substances or produce them within the EU.

***RoHS** : RoHS regulates six major harmful substances (Pb, Hg, Cd, Cr6+, PBBs, and PBDEs). RoHS controls and manages the usage of these substances, as they can be harmful to humans and the environment.

Home Environment

LG Electronics has also tried to improve the immediate surroundings of our customer's living environment by including technology on some of our products that potentially reduces allergens. We are also continuing to research ways to reduce the levels of noise and vibration of our products. LG Electronics is also researching ways to utilize bio-plastics in our manufacturing. LG Electronics is striving to produce products that provide a refreshing and pleasant experience.

● Anti-bacterial / Anti-allergy Functions

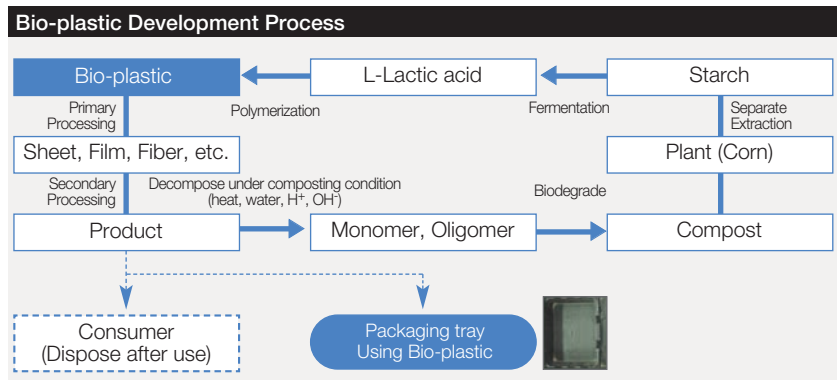
LG Electronics has obtained allergy certifications from the U.K., Germany, and Korea. We received certifications from British Allergy Foundation and the Korea Allergy & Asthma Foundation for some of our products such as washing machines. One of our vacuum cleaners also received certifications from the British Allergy Foundation and Germany's SLG for reducing environmental allergens and minute dusts. The British Allergy Foundation and Korea's FITI Testing & Research Institute also acknowledged our air cleaner for its inclusion of technology that reduces allergens.



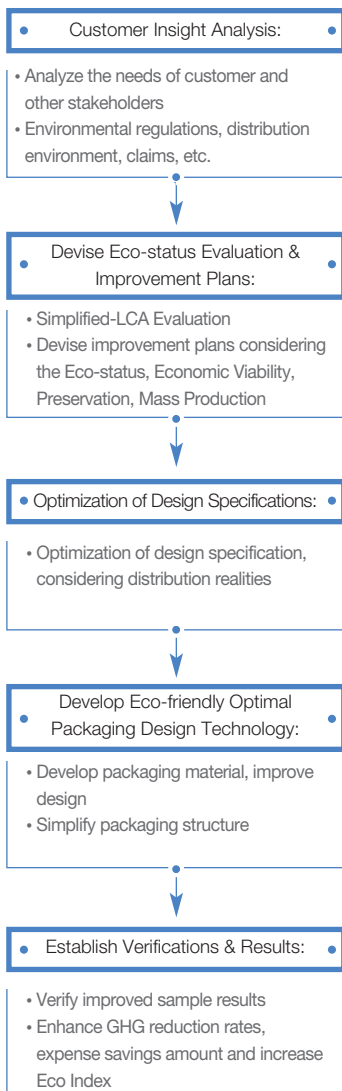
Certification	Certified Product
BAF (British Allergy Foundation)	Vacuum Cleaner, Air Cleaner, Washing Machine
SF Mark (FITI Science Research Center)	Air Cleaner
SLG 5 Star (SLG Pruf-und zertifizierungs GmbH)	Vacuum Cleaner
KAF (Korea Allergy & Asthma Foundation)	Washing Machine

● Development of the Bio-plastic

LG Electronics is conducting research to incorporate bio-plastic in our products and packaging materials. The use of bio-plastic may lead to a reduction of waste in global landfills because bio-plastic uses comstarch and other natural substances that are biodegradable.



Packaging Improvement Process



LG Electronics has attempted to improve our product packaging by utilizing more eco-friendly packaging material. In the development stage, we also consider the ease of dismantling and recycling our products. To achieve this, we have implemented three design strategies and an evaluation checklist to aid in development.

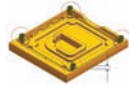
Reduction of Resource Utilization

Reduction of Resource Utilization through Improvement in Packaging

The demand for more eco-friendly packaging is steadily on the rise. We are developing more eco-friendly packaging material, improving the packaging design, and slimming down the packaging structure's size by analyzing the packaging strength. As a result of our efforts, we have been able to potentially reduce energy consumed during production, transportation, and distribution of our products. In 2008, new package designs were put into place for a number of our mobile phones, washing machines, and refrigerators.

Example of Packaging Improvements: Washing Machine Packaging R&D

Packing Absorption Structure Improvement



Redesign of Box Arrangement



We conducted research and development to reduce the quantity of materials used in the packaging and the total weight of the products. The result of the research was a redesign of the box arrangement and an improvement in the packing absorption structure on the bottom of the box. These changes resulted in a decreased weight. By reducing the weight, there is a potential reduction of greenhouse gas emissions during transport.

Enhancing Recyclability

- **Product Design, Taking into Consideration the Ease of Recycling**

We try to evaluate products to ensure that they are designed and developed to be easily disassembled and recycled. LG Electronics has implemented a systematic process of evaluating its products by using the Recyclability Evaluation Check List, the Recyclable Rate Evaluation Check List, and the Recycling Design Guide.

- **3 Major Recycling Design Strategies**

Product developers utilize various tools based on three major design strategies to improve the recyclability of products and obtain ideas for further improvement.

3 Major Design Strategies for the Improvement of Product Recyclability

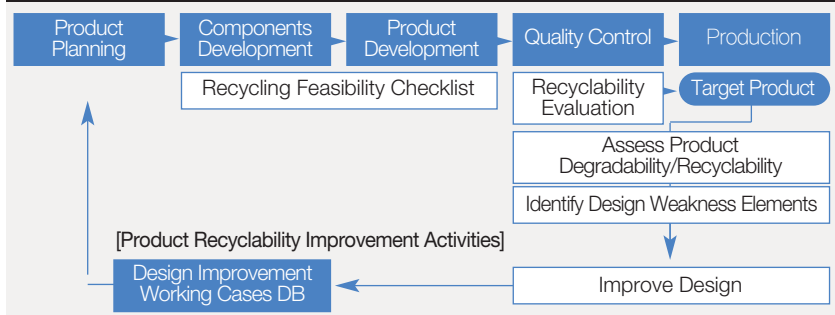
Designing components that are easily identifiable and accessible

Designing components that are easily dismantled

Designing components using materials that are recyclable



Process Integration to Enhance Recyclability during the Product Development Stage



Example of Improved Recycling Rates



Recycling Rate of Phone 42% (EMI Shield)



Recycling Rate of Phone 69% (EMI Shield)

LG Electronics has attempted to limit electromagnetic waves originating from mobile phones by changing our existing "coating method" to a "Shield Can" method that uses metal sheets. By changing our method, we were not only able to reduce costs, but we were able to resolve potential recycling difficulties. The exterior plastic can now be recycled because it is possible to separate the plastic from the stainless steel coating. This results in enhanced recyclability of our mobile phones.

Example of Disclosing the Plastic Material Utilized

We disclose the plastic material (Weight: 25g and over / Size of Flat Area: 200mm² and over) used in our product in accordance with ISO KSM 11469. By disclosing the specifications of the plastic used, recycling becomes easier and more accurate.



Tray drawer