

PHILIPS

sense and simplicity

From Theory to Practice

Sustainable Innovation

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Agenda

- Who is Philips?
- What are the global challenges?
- Meaningful innovation
- EcoVision 5 targets
- Sustainability driving innovation
 - Econova TV
 - EcoCare Iron
 - Senseo Viva Café Eco
- From theory to practice



A strong diversified industrial group leading in health and well-being

Who we are

Founded in 1891

Headquartered in Amsterdam, Netherlands

Sales of €22.3 billion in 2010¹

Growth Markets

32% of 2010 sales generated in growth markets

Globally recognized brand (world top 50)

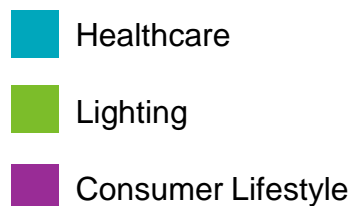
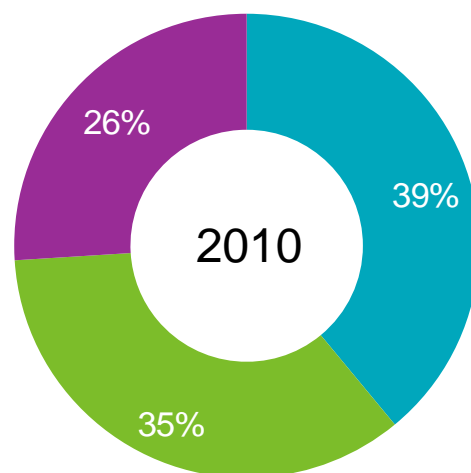
Our brand value doubled to \$8.7bn since 2004²

120,000 employees

Sales and service outlets in over 100 countries

€1.5 billion investment in R&D, 7% of sales

Our businesses



Our mission

“...a global company of leading businesses creating value with meaningful innovations that improve people’s health and well-being.”

¹Note - All figures from the year 2010 onwards exclude Television as it is treated as discontinued operation

²Source: Interbrand

Critical global changes

Ageing population

- The number of people aged over 60 will double from 500 million today to 1 billion by 2015

Emerging markets

- 99% of future population growth will be in emerging markets; Emerging economies are expected to account for 2/3rd of global GDP by 2016

Empowered consumers

- Consumers are increasingly focused on their Health and Well-being and look for products that fit their lifestyle

Climate change and sustainable development

- 19% of global electricity consumption is used for lighting; Energy efficient lighting can save 40%...or 600 power stations worth of energy



Creating meaningful innovations

Improving lives in new ways



Gain deep insights into people's needs and aspirations

by following a process requiring end-user input at every stage

Transform insights into innovations

by combining the diverse perspectives of different disciplines

“Learn fast, fail cheap”

by applying a rigorous process to assess value potential early

Lead in open innovation

by working closely together with partners in a spirit of open innovation

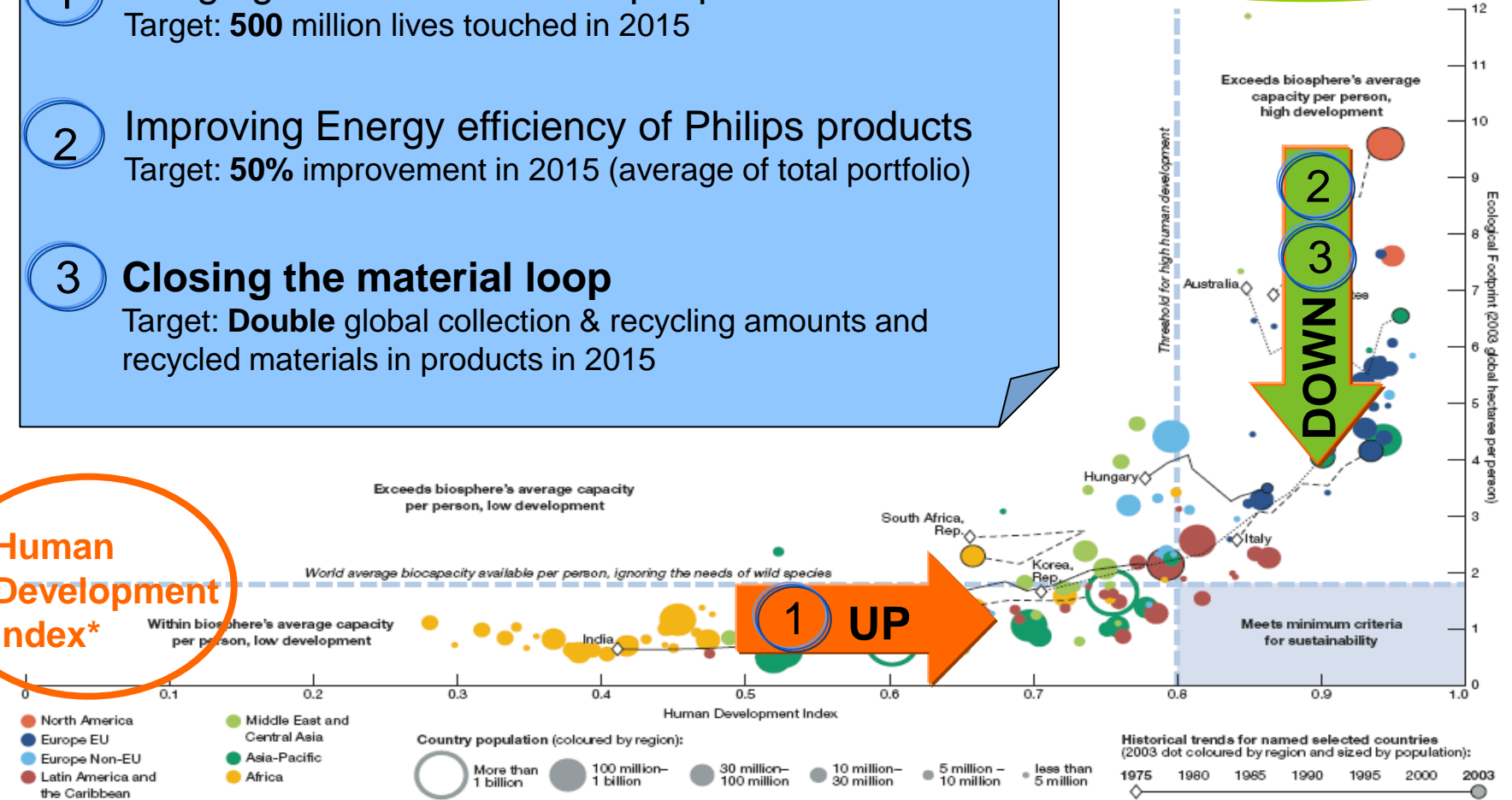
EcoVision 5 Targets

Improving people's health & well-being, while respecting the limits of natural resources

- 1 Bringing care to the lives of people
Target: **500** million lives touched in 2015
- 2 Improving Energy efficiency of Philips products
Target: **50%** improvement in 2015 (average of total portfolio)
- 3 **Closing the material loop**
Target: **Double** global collection & recycling amounts and recycled materials in products in 2015

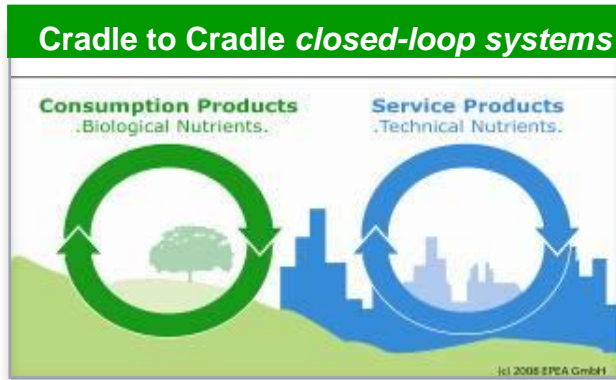
Ecological footprint

Human Development Index*

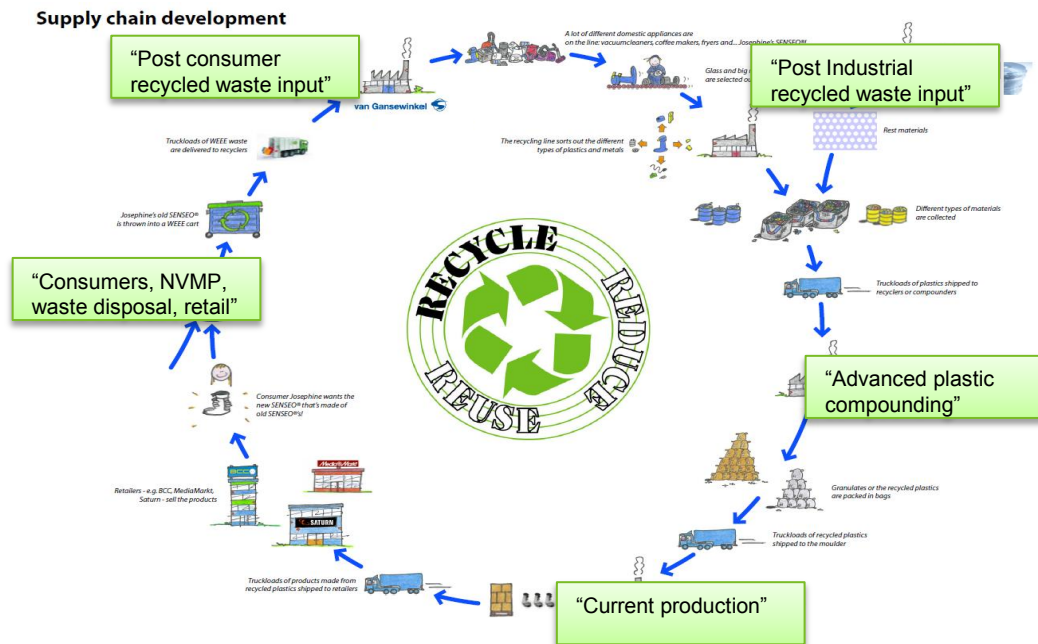


*HDI = life expectancy + education level + purchasing power (see back-up slide)

C2C principles inspired innovation



- C2C Principles**
- Waste = Food
 - Energy from renewable sources
 - Treat the consumer as your best friend
 - Social equity
 - System innovation



- The design of the **ECONOVA TV** started with *the end in mind.*
- It is a TV with the lowest energy consumption *without compromising* on picture quality.
- Designed *to be used over and over again.*
- Where you *never have to replace batteries.*



ECO meets DESIGN

Econova TV 2010



Low power LED display

Back of display = back of TV



All main outside mechanical parts made from recycled aluminum

Solar Cell

Light sensor

0 Watt power switch

2 in 1 stand: wall and table stand in one



Econova TV 2011



Low power LED display



Solar Cell

Back of display = back of TV

Housing parts made from recycled plastics; PVC & BFR free

Light sensor

0 Watt power switch

2 in 1 stand: wall and table stand in one



Energy details – Econova 2010

- Mains switch (0 W)**

A switch is added to the set to remove the set from the mains input and reduce the power consumption in Off mode to 0W. This is the ideal situation for covering longer periods of absence such as a vacation period.

- Extreme Low Standby Power**

In standby mode, supporting wake up from the Solar Remote as well as via the HDMI-CEC link, the set only consumes 0,075W. Almost 15 times less than the legal limit.

- Light sensor**

The internal ambient light sensor tunes the light output of the set to allow enjoyment of the immersive viewing experience at its best while at the same time substantially reducing the power consumption in normal and dark viewing environments.

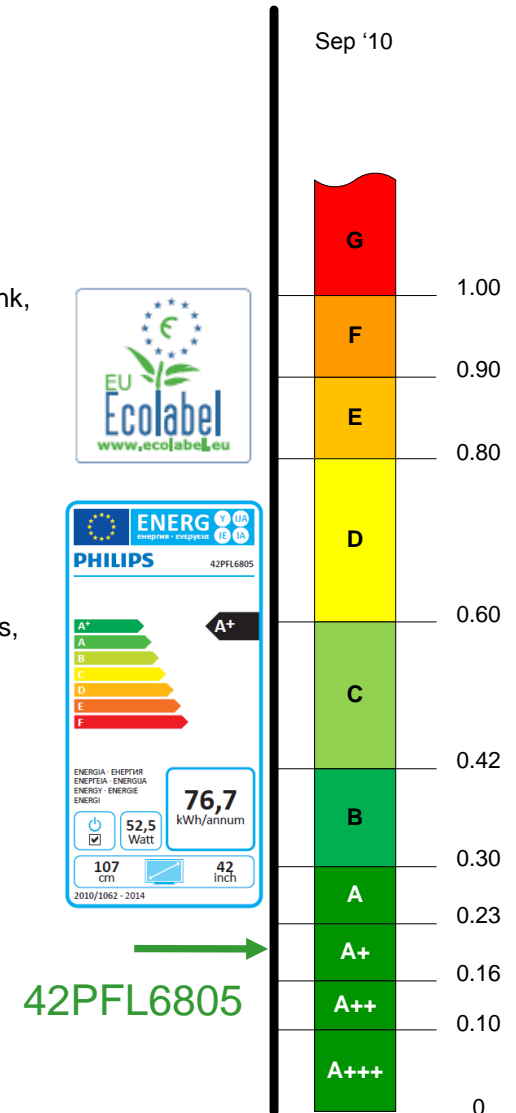
- EU Eco-label compliant**

The EU eco-label certification recognizes televisions that have a range of sustainable features, including low energy consumption and low standby power.

- 40W in Eco mode**

This lower power consumption is obtained through the use of a high efficiency side LED backlight display, high efficiency supplies and state of the art dynamic dimming video algorithms which calculate the needed drive of the backlight for the video content, thus enhancing the picture performance as well as optimizing the power consumption.

EEl-scale



Energy details – Econova 2011

- Mains switch (0 W)**

A switch is added to the TV to remove it from the mains input and reduce the power consumption in Off mode to 0 W. This is the ideal situation for covering longer periods of absence such as a vacation period.

- Extreme Low Standby Power**

In standby mode, supporting wake up from the Solar Remote as well as via the HDMI-CEC link, the set only consumes < 0.1 W. Almost 15 times less than the legal limit.

- Light sensor**

The internal ambient light sensor tunes the light output of the set to allow enjoyment of the immersive viewing experience at its best while at the same time substantially reducing the power consumption in normal and dark viewing environments.

- EU Eco-label compliant**

The EU eco-label certification recognizes televisions that have a range of sustainable features, including low energy consumption and low standby power.

- Energy Efficiency Index (EEI) < 0.16**

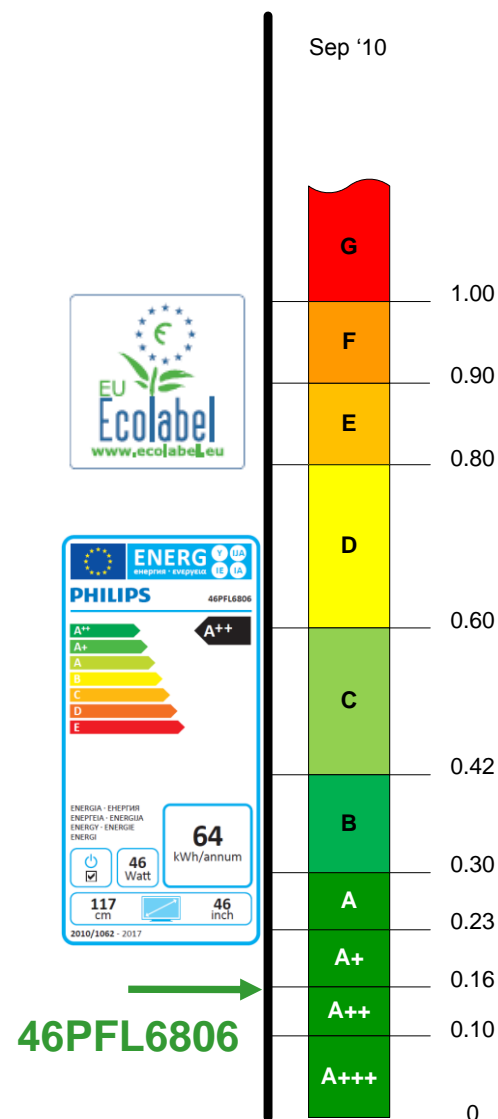
- EEI defines the EU Energy Label

- Result: a **A++ Energy Label**

An EU Energy label efficiency index of 0.16.

Measured according IEC62087 ed.2, using the dynamic video footage, is unprecedented for a Philips TV. This lower power consumption is obtained through the use of a **high efficiency side-lit LED display**, **increased glass transitivity** and **highly efficient optical stack**, high efficiency power supplies and state of the art dynamic dimming video algorithms which calculate the needed drive of the backlight for the video content, thus enhancing the picture performance as well as optimizing the power consumption.

EEI-scale

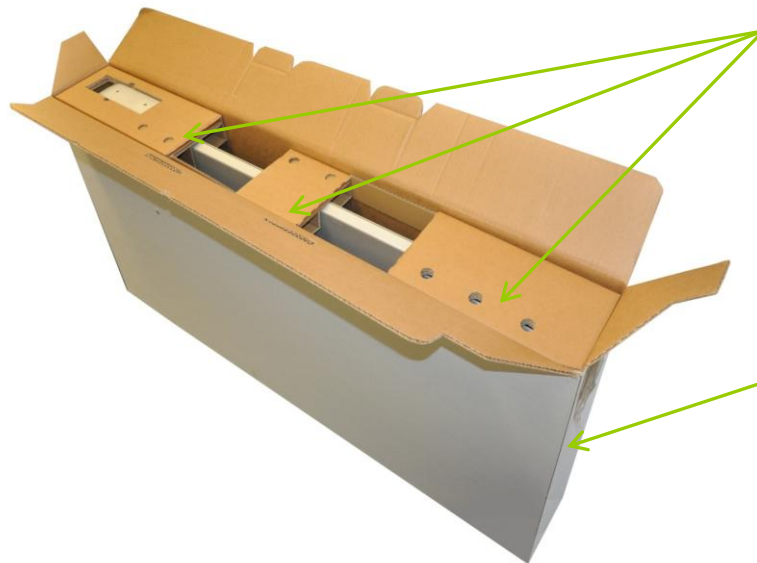


Packaging 2010

- Single piece recycled cardboard box
 - Container load: 480 sets/mega trailer.
- With a thickness of 16 cm, this LCD TV packaging is the thinnest Philips has ever made. In total 5 TV's per pallet make a total of 480 TV's in one transport.

42PFL6805

Total weight packaging	3.3 kg
Recycled cardboard	100 %
EPS	0 %
# TV's per ISO pallet	5 (16 cm thick)
# TV's per mega trailer	480



Cushions in folded cardboard
 = same material as box
 = easy to recycle for end customer

No more plastics are used
 - Stand components in paper bag
 - Remote control in paper bag
 - Dust bag in paper

Packaging 2011

- Single piece recycled cardboard box
- Container load: 360 sets/mega trailer.

With a thickness of 20 cm, this LCD TV packaging is the thinnest 46 inch TV Philips has ever made. In total 4 TV's per pallet make a total of 360 TV's in one transport.

46PFL6806

Total weight packaging	4.4 kg
Recycled cardboard	100 %
EPS	0 %
# TV's per ISO pallet	4 (20 cm thick)
# TV's per mega trailer	360



Cushions made from recycled cardboard structures
 = same material as box
 = no tape used!
 = easy to recycle for end customer and feed into existing paper recycling systems

Packaging made from recycled cardboard fibre

Solar Remote control is packaged in a paper bag

Printed Quick Start Guide only,
 Electronic Help function / User manual is built into TV

Solar remote control & Green User Interface

Solar Remote Control

- **Energy Saving smart setting.** The optimal power and picture quality balance is obtained in the Standard mode. To further save on the power consumption, an Energy Saving smart setting is available which still delivers very acceptable viewing experience for day to day home use.
- **Mute Screen.** Different use cases of television today, such as DVB radio channels or MP3 audio playback do not require video playback. To support these use cases without waste of Energy, the Mute Screen feature disables the display drive completely and restore it upon simple user interaction.
- **Light sensor.** The internal ambient light sensor tunes the light output of the set to enjoy the immersive viewing experience at its best, substantially reducing the power consumption at the same time in normal and dark viewing environments.
- **Auto Switch Off.** For those customers who keep their television on even when not present we developed the auto switch off function. The function automatically enters the standby mode if the set is left playing unattended for 4 hours. If the set is left playing unattended without valid signal input, this time is even reduced to 10 minutes.



Green User Interface

- **Powered by light.** The remote is charged by the solar cell, even for indoor light conditions. For those users who keep the remote in very low light conditions, the battery has capacity to keep it working for a number of months. If there is a persistent shortage of light, an indication on the TV is given when the remote's battery is running low.
- **No battery replacement.** The remote has one rechargeable battery (Lithium Ferrite battery) in which the light energy is stored. This battery lasts the whole product life.
- **Energy efficient power management.** The optimized energy consumption of the electronics results in a low energy need and thus maximum usability of the remote.
- **Materials.** The top plate is made from recycled aluminum. No additional finishing has been added to the plastic housing.

Integrated production line

Big difference compared to a standard production line is that the TV is made on an **integrated production line** in 1 plant that starts with the display glass and at the end the TV is complete, packaged, palletized and transported to the warehouse.

No packing and unpacking of sub assemblies: no foam, cardboard and wood waste created for temporary storage of sub assemblies.



EcoCare Iron



Consumer Insight

Our consumers want to save energy in the house, but are not willing to compromise on performance



*'I care about the environment and I am aware of the negative impact that energy consumption and material waste have for **me and my family** in the future. For example, an iron consumes energy but I have to iron regularly, as well ironed clothes are important.*

***I want to use less energy when possible, but while ironing I would never compromise on the result.** I wish there was an iron that would meet my environmental concerns by giving me great results, but would simply consume less energy, and reduces the material waste.'*



Our Results: EcoCare Iron



**100% steam power,
25% less energy**
with Automatic Energy Saving and
made of **30% recycled material**

Automatic Energy Saving

- Auto energy saving function reduces steam wastage and saves up to 25% energy

Sustainable Materials

- 30% recycled materials
- Iron made of 85% recyclable material
- Packaging and user manual made of 100% recycled material

Easily removes creases

- 40 g/min continuous steam
- 130-160 g/min vertical steam boost
- SteamGlide Soleplate

Comfortable ironing

- Less refilling with extra-large 300 ml water tank
- Extra-long 3 m cord for maximum reach
- Extra-large water inlet for fast, easy filling
- Soft grip for lasting ironing comfort
- Steam tip lets you iron right into hard-to-reach areas

Longer lifetime

- Double Active Calc System prevents scale build-up

Safe ironing

- Drip-stop system keeps your garments spotless while ironing
- Auto Shut off

ON-PRODUCT

Hang-tag



Senseo Viva Café Eco



Consumer Insight

“I wish I could be certain I’m **making the right choices** when choosing my coffee machine and the coffee that goes into it”

'For me the main point is that I feel better, for instance when I buy fair trade my environmental conscience is relieved'

'In general I like the idea of classifying small appliances in terms of sustainability, as you have it with white goods, (...) then you are able to decide which one you want to buy in the end'

⇒ **Recycling is seen as a sensible contribution to reducing the amount of waste and therefore to protect the environment**



End-User benefit

With SENSEO® you can be confident that every day when making and enjoying the coffee you love, you are doing your little bit to help others as well as the environment

What our consumers are saying | 6 focus groups in Germany and NL

Our results: SENSEO Viva Café Eco



- Made of up to 50%* recycled plastics.
- All outer (visual) plastic parts are made of 100% recycled materials.
- 5 minute auto shut off for energy saving (as opposed to 60 min for other SENSEO products).
- Sustainable packaging (at least 90% recycled cardboard will be used).

** Excluding plastic parts that require food approvals (water container and coffee outlet)*



Recycling & disposal



Energy efficiency



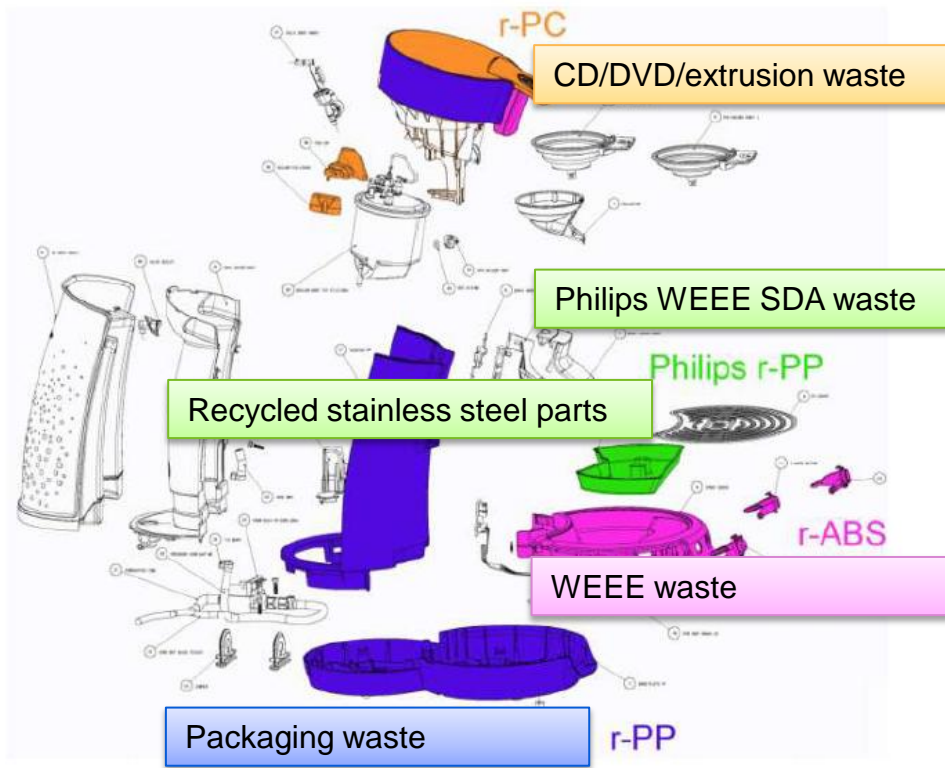
Packaging



- Business partnership with Douwe Egberts to offer a sustainable proposition including UTZ certified coffee.

Sustainovation

- ✓ 50% of plastics from recycled origin (ECOvision5 target)
- ✓ 13 parts made from 100% recycled materials
- ✓ 4 new materials validated, 4 new suppliers introduced
- ✓ 76 TON waste re-used
- ✓ More than 90% of the materials used can be recycled



- ✓ High end, low cost, **3D texture** in combination with recycled plastic



- ✓ 24 hours test to show **process capability** (lifetime durability, colour stability/SPC, Cp/CpK) of all recycled plastics

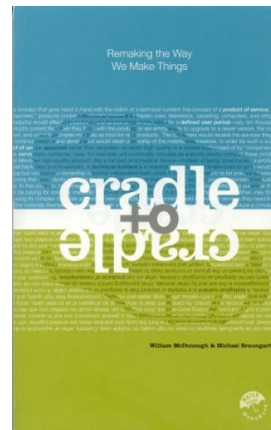


- ✓ Recycling lines **co-developed** and quality of the materials improved



From Theory to Practice

In 2008, Philips CL started applying Cradle-to-Cradle principles (C2C) to engage on sustainable innovation and launched already in 2009 its first commercial product (EnergyCare vacuum cleaner), ...



... and in 2011 Philips delivered to the market some of the best ever eco-designed products that have led to improved business practices and new business opportunities.

