



November 15, 2011
Business Case for Sustainability

QAA Meeting – Chicago 16th November 2011

WHEN YOU NEED TO BE SURE



- Outline of SGS global sustainability resources, capabilities and benefits
- Corporate carbon footprinting – Why should your company be engaged in the assessment of company wide Scope 3 / product life cycle impacts:
 - To determine its size as compared to your company's direct operations
 - To identify specific product sector(s) for improvement
- Utilization of LCA results and ecodesign case studies
- Communication of product related environmental messages to consumers



- Founded in 1878 as a grain inspection company
- World's leading inspection, verification, testing and certification company
- Experts at:
 - Providing competitive advantage
 - Driving sustainability
 - Delivering trust
- 64,000 employees, including:
 - Scientists, engineers, doctors, chemists, auditors and inspectors
- 1,250 offices and laboratories globally



SGS'S ENVIRONMENTAL SUSTAINABILITY SERVICES

- We are expanding into the US with sustainability services,
- Various services to be provided

Strategic consulting

- Identifying the best adapted sustainability strategy,
- Recommending action plans to improve the products and the organization.
- Helping and monitoring your suppliers in order to ensure they comply with your requirements.

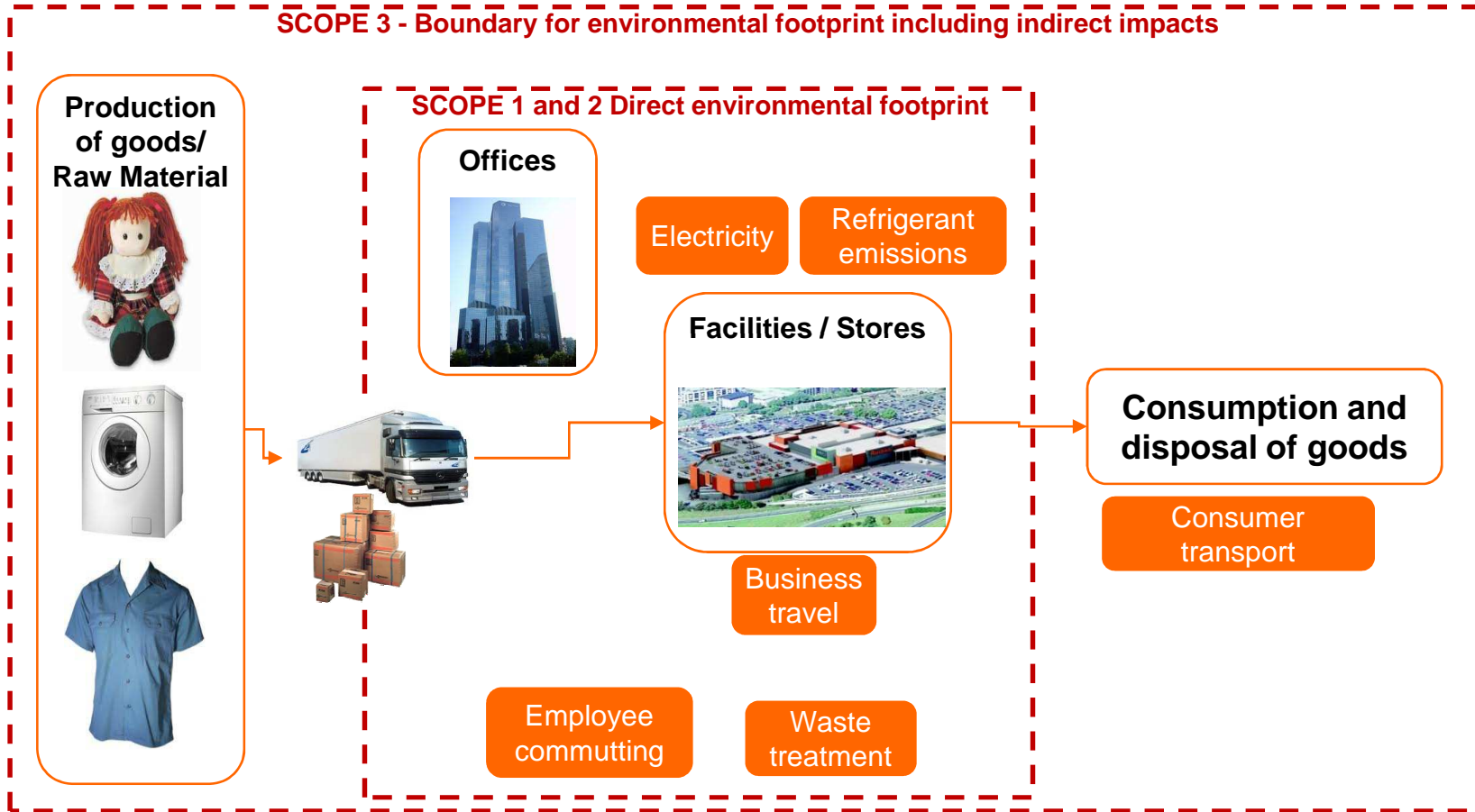
Technical consulting

- Social Audits,
- Chemical testing (REACH, ROHS,...)
- Life Cycle Assessment,
- Eco design,
- Product environmental labeling

- Global presence

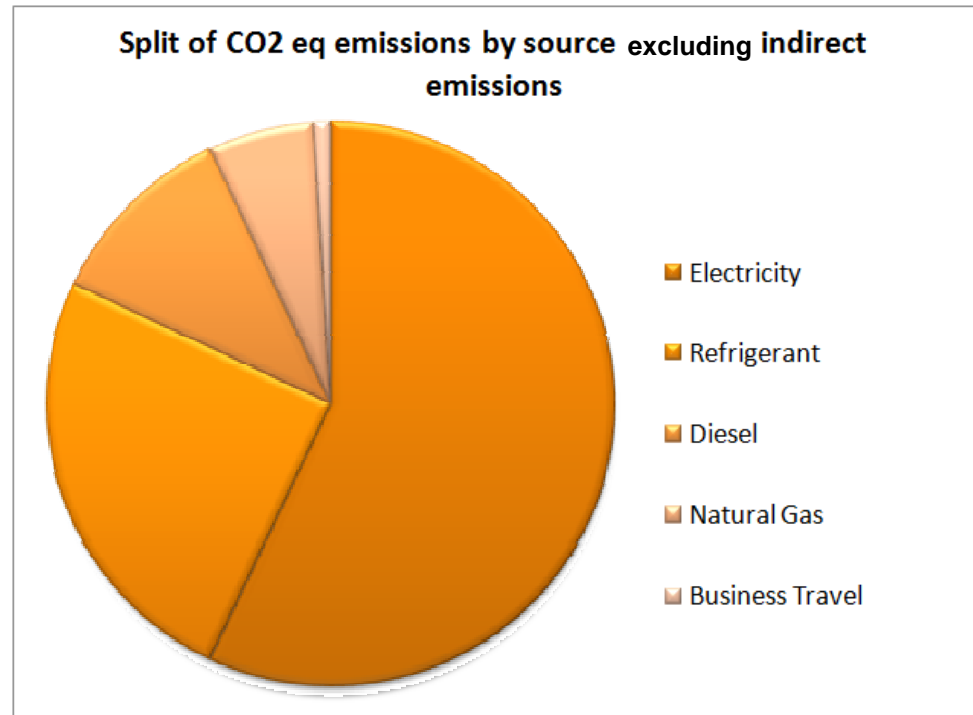


CARBON FOOTPRINT OF A RETAILER/MANUFACTURER – CASE STUDY

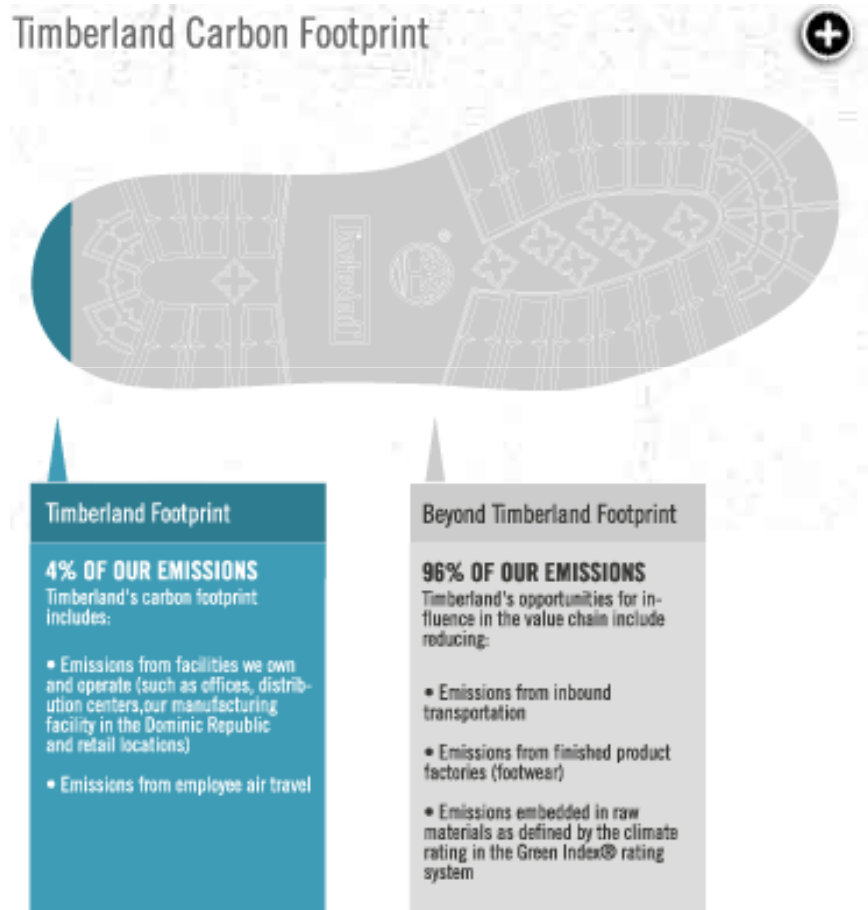




CARBON FOOTPRINT OF A RETAILER – CASE STUDY



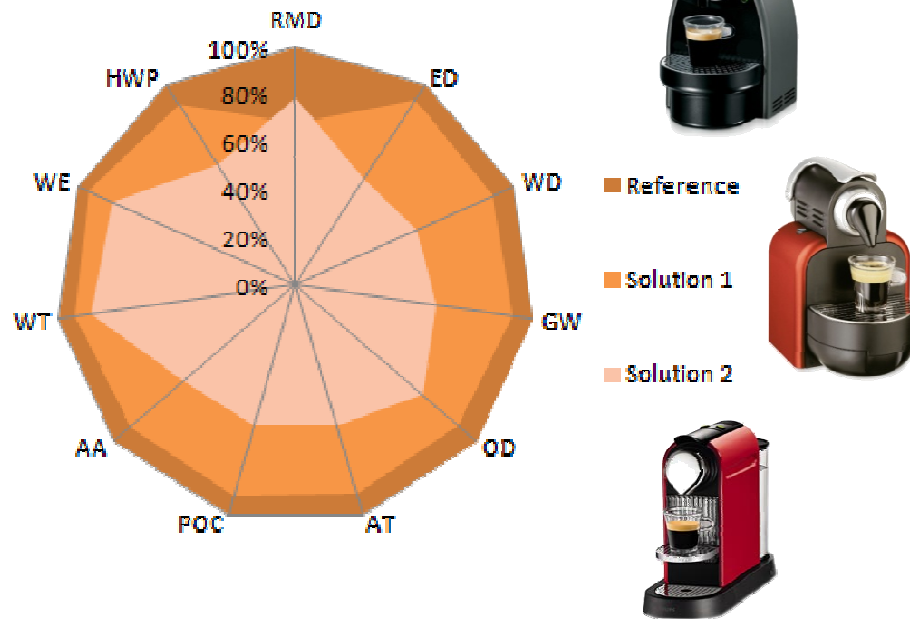
WHERE ARE THE MAJOR IMPACTS OF RETAILERS/MANUFACTURERS?



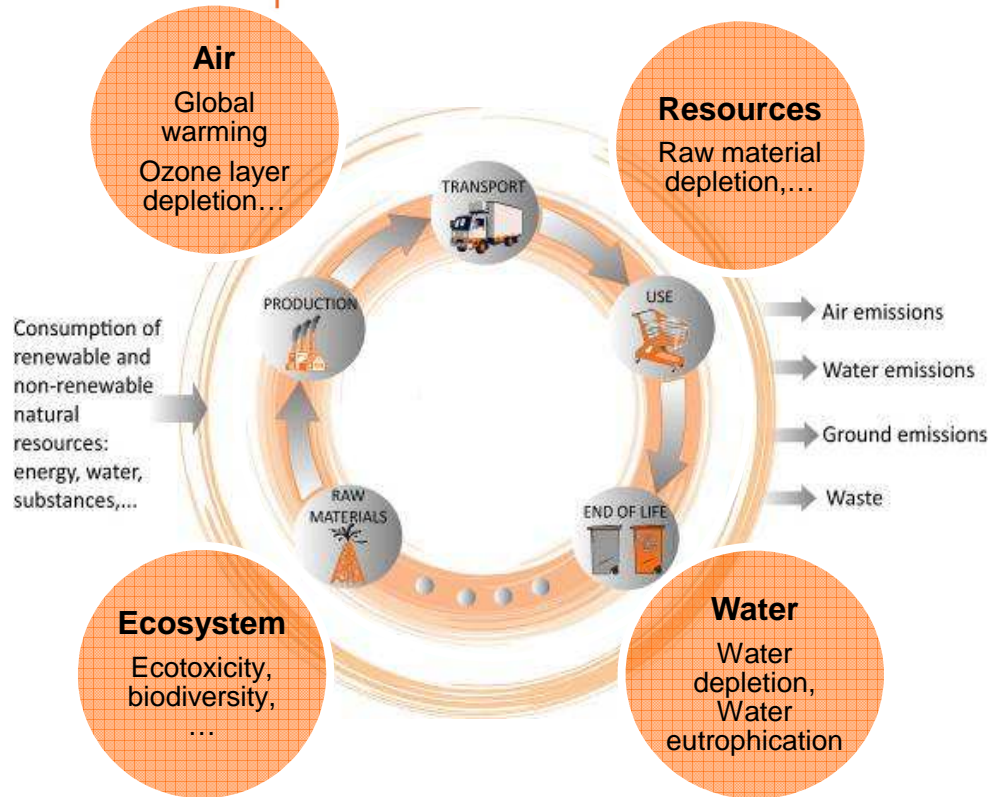
- “The majority of our overall carbon footprint lies in our materials value chain. Raw materials production alone accounts for approximately 71% of our overall climate impact.”
- “Our most effective way to reduce those emissions is to make better material choices at the beginning of the design and development process.”

<http://responsibility.timberland.com/climate/#reducing-impact-through-design>

Comparative environmental footprint

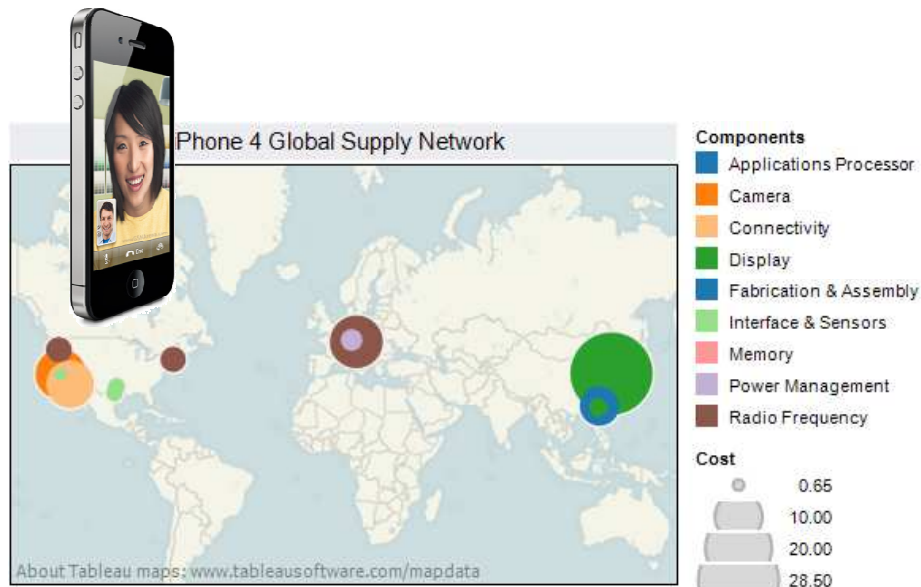


- Ecodesign is an approach to find the best balance between technical, economical and environmental constraints during the design phase of a product
- Standards: ISO 14062, ISO 14001, ISO 14006
- Two major principles to avoid mistakes:
 - Life Cycle approach
 - Multi-criteria



- Quantification of the environmental impact of products and services
- Life Cycle and multi-criteria analysis including the carbon footprint, water footprint,...
- Standards: ISO 1404X
 - Full LCA to support some political decision making
 - Simplified LCA to support Ecodesign
 - Generalization of LCA to support environmental labeling initiatives

ECODESIGN TO REDUCE THE DEPENDENCE ON FOSSIL FUELS



- The supply chain can be complex and the cost of the transport directly linked to the price of fossil fuels
- The price of Oil will increase
- Ecodesign allow to reduce the dependence on fossil fuels



ECODESIGN TO REDUCE THE DEPENDENCE ON COST OF RAW MATERIAL

« Raw material prices for plastics have risen due to increasing oil prices and oil supply instabilities, high demand for metals has driven up prices, and the high energy use in producing containers makes this packaging material sensitive to energy prices, »

Punchard told CosmeticsDesian-Europe.com – March 2011

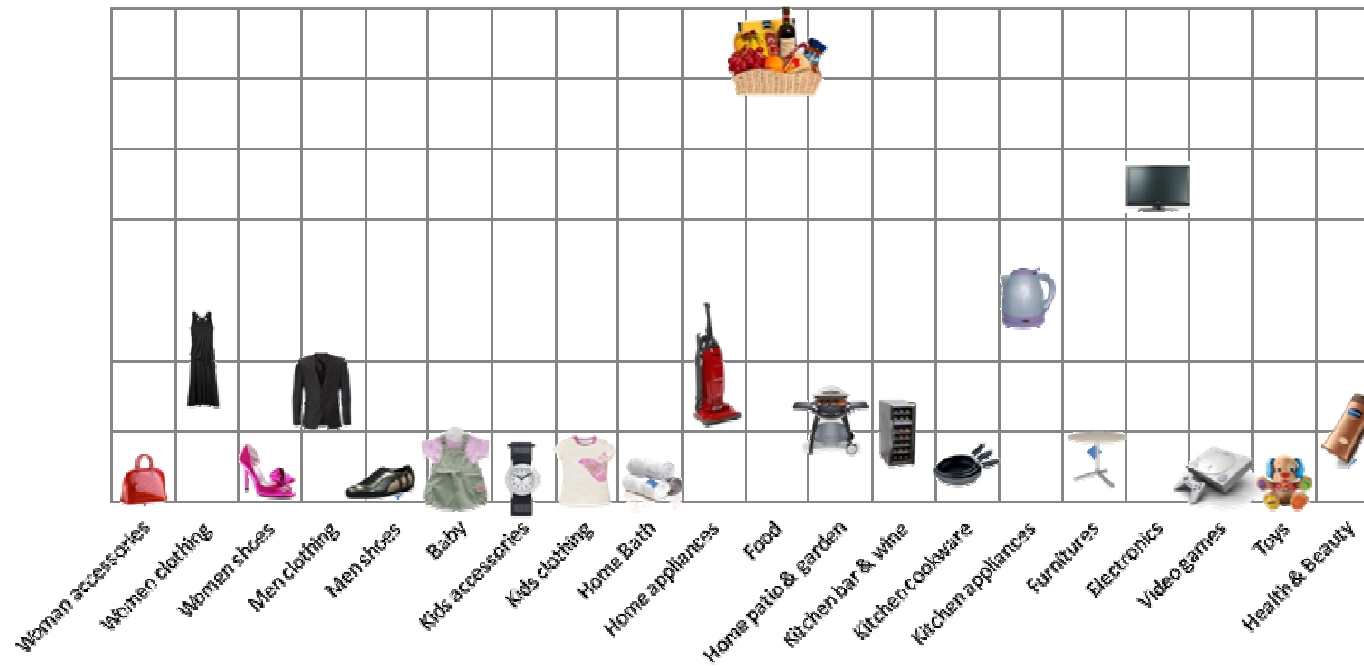


- Product price is linked to the composition. The bill of material of a product is defined in the early stage of the design process
- Ecodesign is a solution to reduce the dependence on costs of raw material and to increase the profitability

HOW CAN YOU DEFINE THE PRIORITIES?

- Include the scope 3 in the analysis of your corporate impacts
- Simplified assessment of the impacts of each product line to identify the products with the greatest impacts
- Implement a progressive strategy to design/source more sustainable products

Annual carbon footprint (lb of CO2 eq for the annual production)



HOW TO ECODESIGN AN ELECTRICAL APPLIANCE IN 4 STEP?



STEP 1-DIAGNOSTIC OF THE CURRENT ENVIRONMENTAL IMPACTS

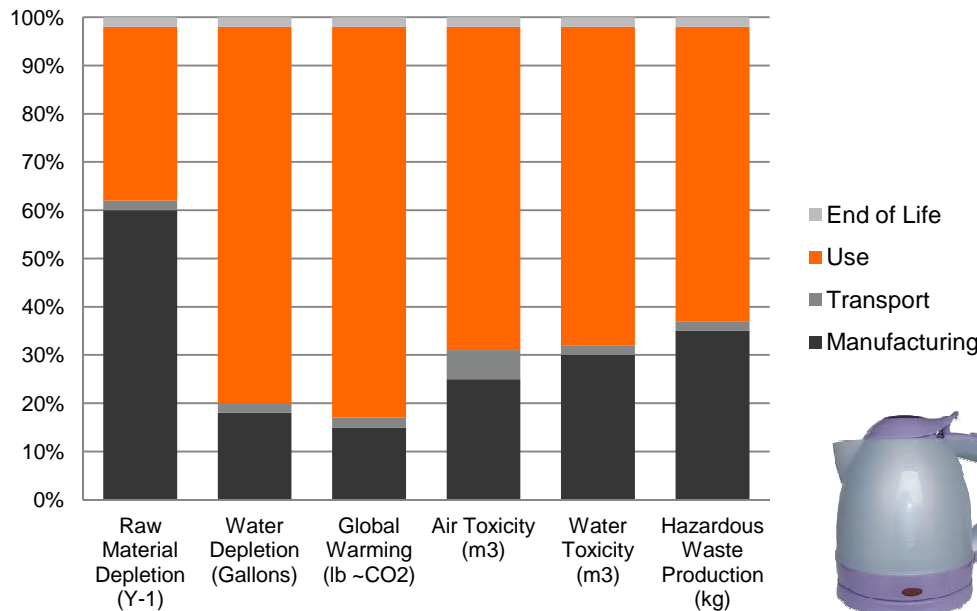
Objectives

- Quantify the impacts to obtain a reference baseline, to fix some targets
- Identify the weaknesses of the product
- Define a relevant and efficient ecodesign strategy

Results

- 80% of the impacts are due to the energy consumption of the product
- Manufacturing is responsible of the major impact on the natural resources depletion
- Transport and end of life are not significant

DISTRIBUTION OF THE LIFE CYCLE IMPACTS OF A HOT WATER DISPENSER



STEP 2- INTEGRATE ECODESIGN TARGETS IN THE DESIGN SPECIFICATIONS

■ Method

- Fix reasonable technical objectives focusing on the weaknesses of the product
- Training of the people involved in the design/sourcing
- Monitor the achievement of the objectives during the project

■ Objectives fixed in the new specifications

- Heat only the necessary water quantity
- Stop heating water just before the boiling point

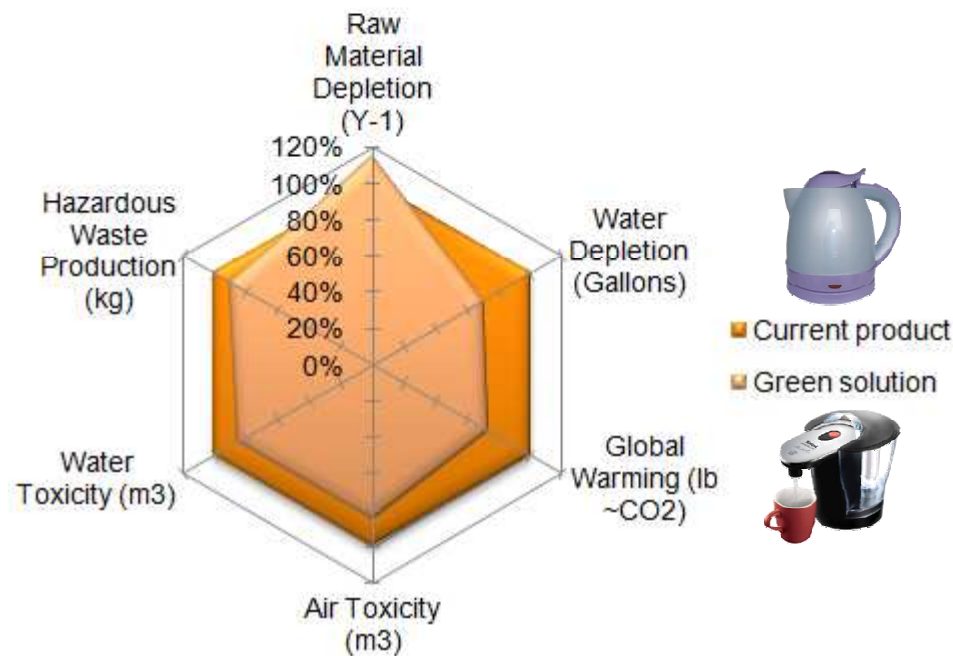
■ Technical solutions developed

- Instant heating system (less than 3 seconds) – the system has a patent
- Cup-adjusted quantity of heated water



STEP 3 – QUANTIFICATION OF THE IMPROVEMENT

Comparative assessment between the two products



- Reduction in energy consumption
 - Heat only the water that is actually needed
 - Stop heating when the water reaches the boiling point
- After ecodesign:
 - Reduction by 5 to 30% of the environmental footprint (17% of the carbon footprint)
 - Except for the raw material depletion due to the production of the additional electronics which themselves permit a reduction in all the other impacts (especially greenhouse effect).

STEP 4 – COMMUNICATION/MARKETING

■ Objectives

- Respond to the consumers' environmental sensitivity
- Communicate on verifiable/measurable information

■ Tools

- Product Environmental Profile, PEP (Communication BtoB) (ISO 14025)
- Self-declarations
- Energy Star Label
- SGS Carbon Reduction Mark

- New
- Women's Fashion
- Men's Fashion
- Fashion Extras
- Kids
- Gardening & Wildlife
- Outdoor Living
- Eco Gadgets
- Eco Money Savers
- Eco Home/ Household
- Cleaning/ Laundry
- Body Care
- Natural Health
- Office
- Books/CDs/Games
- ooffoo



Energy Saving Tefal Quick Cup Hot Water Dispenser

Now you can save time and energy with Tefal's incredible new Quick Cup Water Dispenser. Just one press of a button and you can have a cup of hot or cool filtered water in just 3 seconds. So no need to wait around for a kettle to boil! Thanks to the unique and exclusive opti-quick heating system you can make a cup of tea or coffee in an instant and you only heat and use the water you need. Saving you time, energy, water and of course money. Tefal claim that it can save up to 65% of the energy used by a standard kettle.

Reduces Chlorine, Lime Scale and Impurities

But that's not all! The Tefal Claris Aquafiltration system reduces chlorine, lime scale and impurities in the water, so whether they're hot or cold you can enjoy your drinks ready filtered from the Tefal Quick Cup dispenser. The filter lasts for up to 6 weeks and filters approximately 50 litres of water – saving you the need to buy bottled water.

- Product **ecodesign** in a company is:
 - A new parameter to include in the design process to find the best balance between technical, economical and environmental constraints
 - A new approach that generate innovation
 - A way to differentiate with the competitors
 - Profitable if progressively and cleverly implemented



INVOLVE OF YOUR SUPPLIERS IN YOUR APPROACH

- Tell them that you are concerned about the sustainability of their products
- Include technical constraints in the specifications of your private label products
- Define a score card to challenge your suppliers on their sustainability management system
 - Example of Walmart packaging sustainability scorecard

The screenshot shows the Walmart Corporate Sustainability Index page. The header includes the Walmart logo and navigation links like Home, About Us, Press Room, Health & Wellness, Careers, Community & Giving, Diversity, Sustainability, Investors, and Suppliers. The main content area is titled 'Sustainability Index' and includes a 'Follow @walmart' button. Below this, there is a 'Related Information' section with links to various reports and press releases, and a 'Related Resources' section with links to assessment FAQs and webinars. The page also features a sidebar with navigation options like Events, Global Responsibility Report, and Sustainability Index.

The screenshot shows the Walmart Stores, Inc. Package Modeling tool. The interface is divided into several sections: 'Step 1: Calculate', 'Step 2: Create a Package', 'Step 3: Create a Model', and 'Package & Model Library'. The 'Step 1: Calculate' section includes a 'Calculate' button and a 'Calculate' button. The 'Step 2: Create a Package' section includes a 'Create Package' button. The 'Step 3: Create a Model' section includes a 'Create Model' button. The 'Package & Model Library' section includes a 'Library' button. The tool also features a 'Background & Product Info' section and a 'Setting Link Packaging Variables' section. The 'Setting Link Packaging Variables' section includes a table with columns for 'Variable Name', 'Variable Type', and 'Variable Value'. The table contains several rows of variables related to packaging, such as 'Is this item a brick pack?', 'What is the percentage of tape utilization?', and 'How many packing units are used?'. The 'Additional Information' section includes a table with columns for 'Variable Name', 'Variable Type', and 'Variable Value'. The table contains several rows of variables related to packaging, such as 'What percentage of the packaging material is recycled?' and 'What percentage of energy efficiency per ton of manufacturing innovation?'.

PRODUCT ENVIRONMENTAL PROFILE AIR CONDITIONING EQUIPMENT ISSUED - DD MONTH YYYY



This document is based on the principles of the ISO 14001, which relates the general principles of environmental protection, the ISO 14020 technical report, relating to type II environmental declarations, and the ISO PAS 6245.

COMPANY DESCRIPTION
At SGS, we believe that technological innovation is the key to success in the marketplace. Founded in 2000, we've led the way in bringing innovative digital products and applied technologies to our customers.

PRODUCT DESCRIPTION
The product is a split system air conditioner. It is designed to provide efficient cooling and heating for residential and commercial spaces. The unit is compact and easy to install.

LIFE CYCLE
The product is designed for a long service life of up to 15 years. It is energy-efficient and has low maintenance requirements. The unit is made from high-quality materials and is built to last.

MANUFACTURING
The product is manufactured in a state-of-the-art facility. The manufacturing process is highly automated and uses advanced machinery. The facility is ISO 9001 certified and follows strict quality control procedures.

DISTRIBUTION
The product is distributed through a network of authorized dealers and distributors. The units are shipped in sturdy, protective packaging to ensure they arrive in perfect condition.

INSTALLATION
The product is easy to install and requires minimal maintenance. The installation process is straightforward and can be completed by a trained technician in a short amount of time.

USE
The product is designed for use in a variety of environments. It is energy-efficient and has low maintenance requirements. The unit is built to last and provides reliable performance for many years.

CONSUMABLES
The product does not require any consumables. It is designed to be low-maintenance and easy to use.

MAINTENANCE
The product requires minimal maintenance. It is designed to be easy to clean and maintain. The unit is built to last and provides reliable performance for many years.

REGULATIONS
The product complies with all applicable regulations and standards. It is designed to be energy-efficient and has low maintenance requirements. The unit is built to last and provides reliable performance for many years.

	Plastics		Metals		Other			
	Mass (g)	%	Mass (g)	%	Mass (g)	%		
PS	1480	32.8%	Steel	2270	49.9%	Ytane dioxide	14	0.3%
PAS	89.6	2.0%	Zamak	70	1.5%	Glass fiber	8.4	0.2%
PC	25.5	0.6%	Brass	48	1.1%	Other	8.6	0.2%
Epoxy resin	36.8	0.8%	Copper	28	0.6%			
Polyester resin	16.8	0.4%	Stainless steel	6	0.1%	Cardboard	456.6	10.0%
POM	2	0.0%				PE	10.8	0.2%

Total weight of the product (including packaging) : 1000 g



WHEN YOU NEED TO BE SURE



1/5

Climat : 42 kg eq CO₂

Ressources : 29.10⁻¹² %/an

Water : 636 L



- Provide relevant environmental information on products to customers
- Optimization and generalization of LCA to support environmental labeling
- Standards: ISO 1402X, BP X30-323, PAS 2050, ISO 14067, PEP, FDES, EPD,...





- Development of product category rules on every consumer products to standardize LCA practices
- A label on every product based on LCA results to change the consumption patterns of consumers
- An initiative to stimulate the development of Ecodesign
- We have experience in generalizing LCA for thousands of products : Cost reduction

ENVIRONMENTAL LABELING OF CONSUMER PRODUCTS – MYTH OR REALITY?

Votre panier Connexion S'inscrire

COLLECTION BOUTIQUE EN LIGNE MAGASINS **Levi's®** Product Search OK

AUJOURD'HUI, QUATRE REFERENCES LEVI'S® HOMME PORTENT L'ETIQUETAGE ENVIRONNEMENTAL

Reference	CO ₂ (kg CO ₂ eq)	Water (l)	Washing (g P eq)
BLACK 00501-0165	8,42 1,23	10,80 0,41	5,49 0,52
MOSTLY MID BLUE 13527-0009	8,22 1,23	8,17 0,41	4,81 0,52
MARLON 00501-0162	8,72 1,23	8,10 0,41	5,58 0,52
LAST YARD 00501-0789	8,66 1,23	8,18 0,41	5,57 0,52

ACHETER

Données concernant le cycle de vie du jean hors utilisation par le consommateur.
 Données concernant l'utilisation du jean par le consommateur à raison d'un entretien tous les 15 jours pendant 1 an (26 lavages/séchages).

Les indicateurs | Le cycle de vie d'un jean Levi's® | Des conseils environnementaux | **Nos produits étiquetés homme** | Nos produits étiquetés femme



SGS CARBON FOOTPRINT MARK

Can be applied on the product, on packaging or other medium



Greenhouse gas emissions of this **1kg of chicken meat** are **3.5kg CO₂e**. The calculation is based on the data collected in **Jan 2010** from cradle to gate.

SGS Report No. 123456

For more information:
www.sustainability.sgs.com

***Compulsory statement.
Shows how and when the impact was calculated.
This part is the proof that what you are stating has been validated by an independent expert***



Step 1: TRANSPARENCY

This mark proves that you have **measured the emissions** of your product



- Set up a carbon reduction strategy
- Define a target
- Start communicating directly on your product



Step 2: REDUCTION ACHIEVEMENT

This mark indicates that your product carbon footprint has been **reduced**



- Assess your progress
- Mitigate remaining impact



Step 3: MITIGATION

This mark attests to the **offset** of the remaining footprint through recognised carbon credit programs

CONTINUOUS IMPROVEMENT

THANK YOU !

Xavier Vital

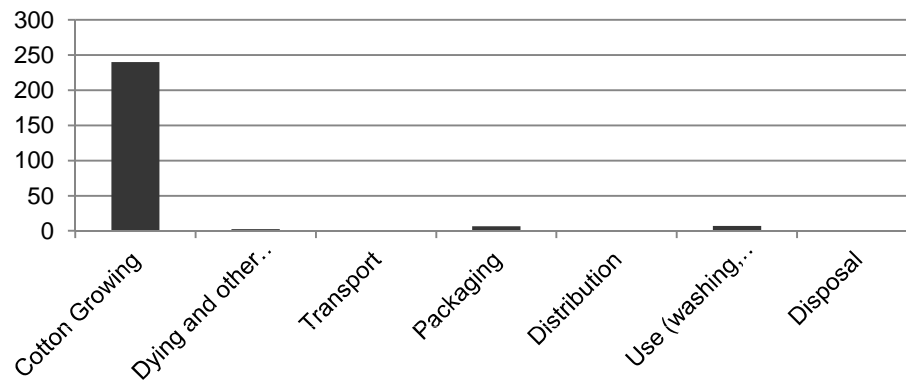
Xavier.vital@sgs.com

WHEN YOU NEED TO BE SURE



CASE STUDY – LCA OF A COTTON TEE SHIRT

Water Depletion (Gallons per tee shirt)



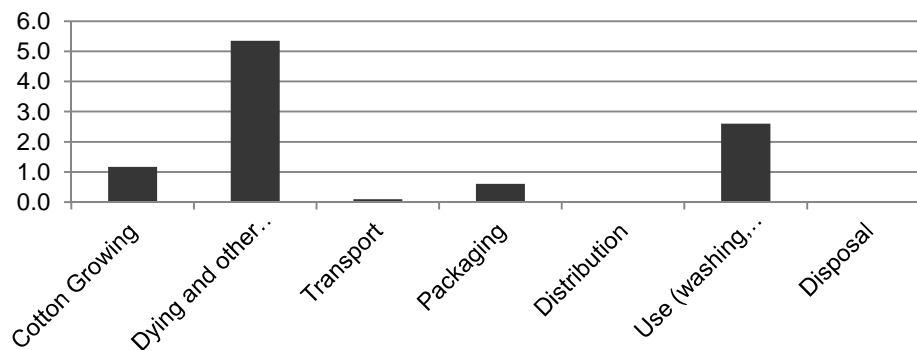
- Water consumption is mainly due to the cultivation of the cotton

- Due to intensive irrigation

- Carbon footprint is mainly due to the transformation process of (blending, carding, spinning, Knitting, finishing,...)

- Due to the Energy consumption of the manufacturing processes

Global Warming (lb ~CO2 per tee shirt)



CASE STUDY – CONSEQUENCES ON THE ENVIRONMENT



July - September, 1989

October 5, 2008

- Example of the Aral sea in Kazakhstan and Uzbekistan
- Intensive production of cotton
 - The Soviet Union's "Irrigation plan" specifically called for using the river-water that was feeding the lake

CASE STUDY – WHAT CAN YOU DO WITH THE RESULTS?

- Define an Ecodesign strategy
 - Source cotton from regions where the production do not require intensive irrigation
 - Other actions according to the results of the LCA
- Train your staff to understand the environmental issues, and help them to implement alternative solutions
- Support the designers/buyers by providing ecodesign guidelines
- Involve your suppliers in this strategy
- Launch some audits to control the claims of your suppliers