

The background of the slide is a close-up photograph of water. It shows numerous small, clear bubbles rising to the surface, creating concentric ripples that spread outwards. The water has a deep blue hue, and the lighting highlights the texture of the ripples and the spherical shape of the bubbles.

Electrolux Sustainability

Henrik Sundström
Sustainability Affairs

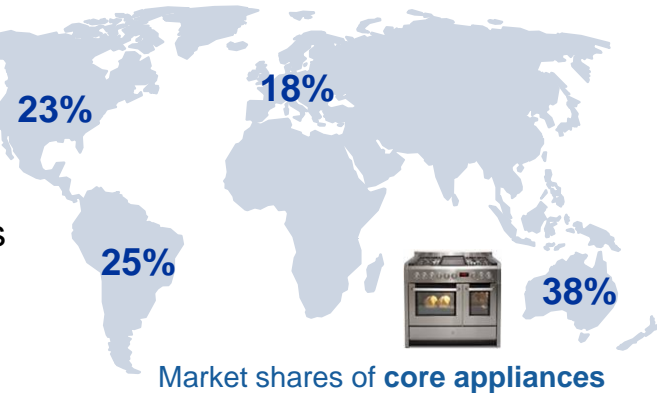
Thinking of you
Electrolux

Electrolux key facts

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Position

- Sales SEK 105 billion
- Op income SEK 4.5 billion
- Sales on more than 150 markets
- A global leader in appliances



People

- 57,000 in 60 countries

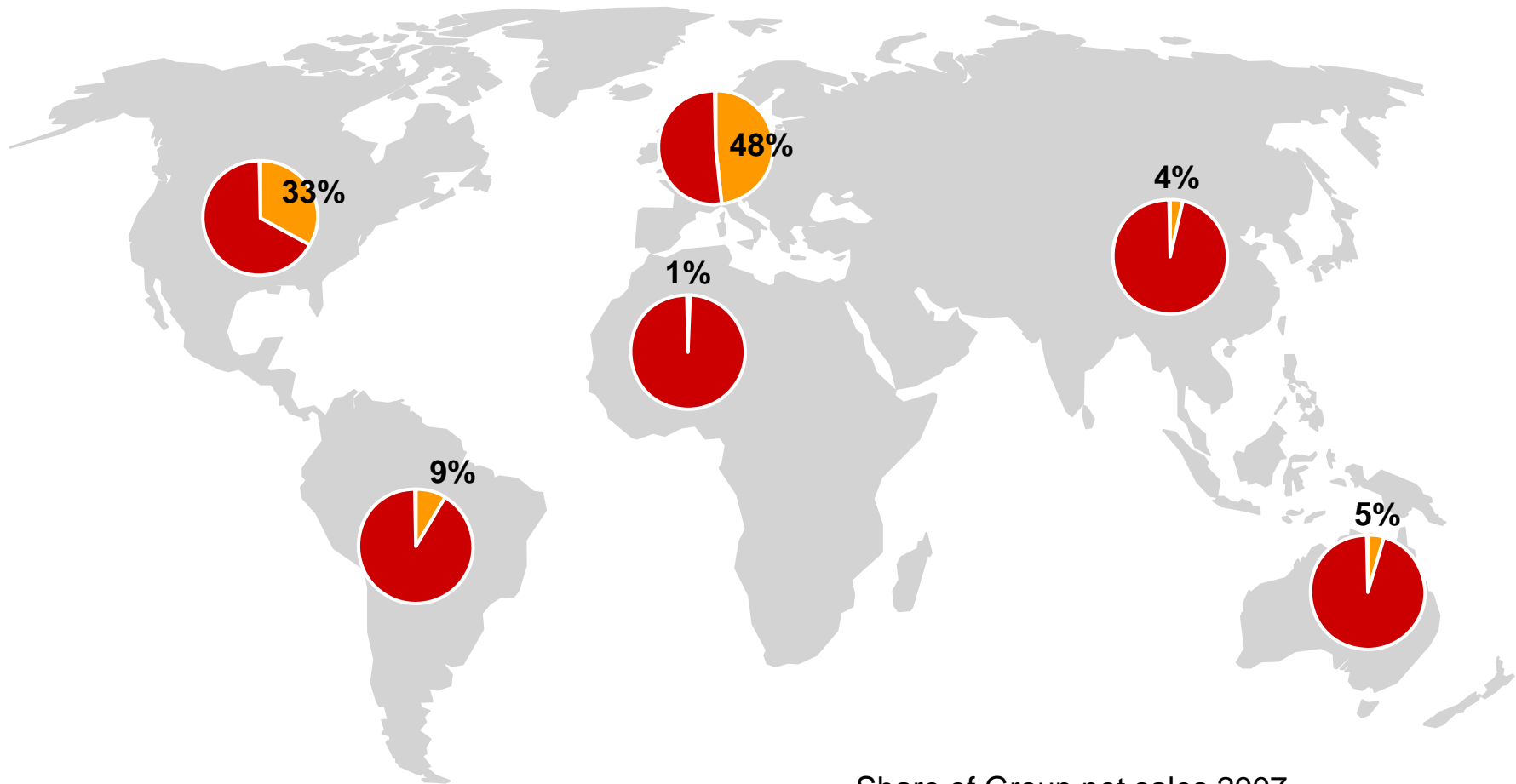
Products

- More than 40 million products per year



Electrolux – a global company

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Share of Group net sales 2007

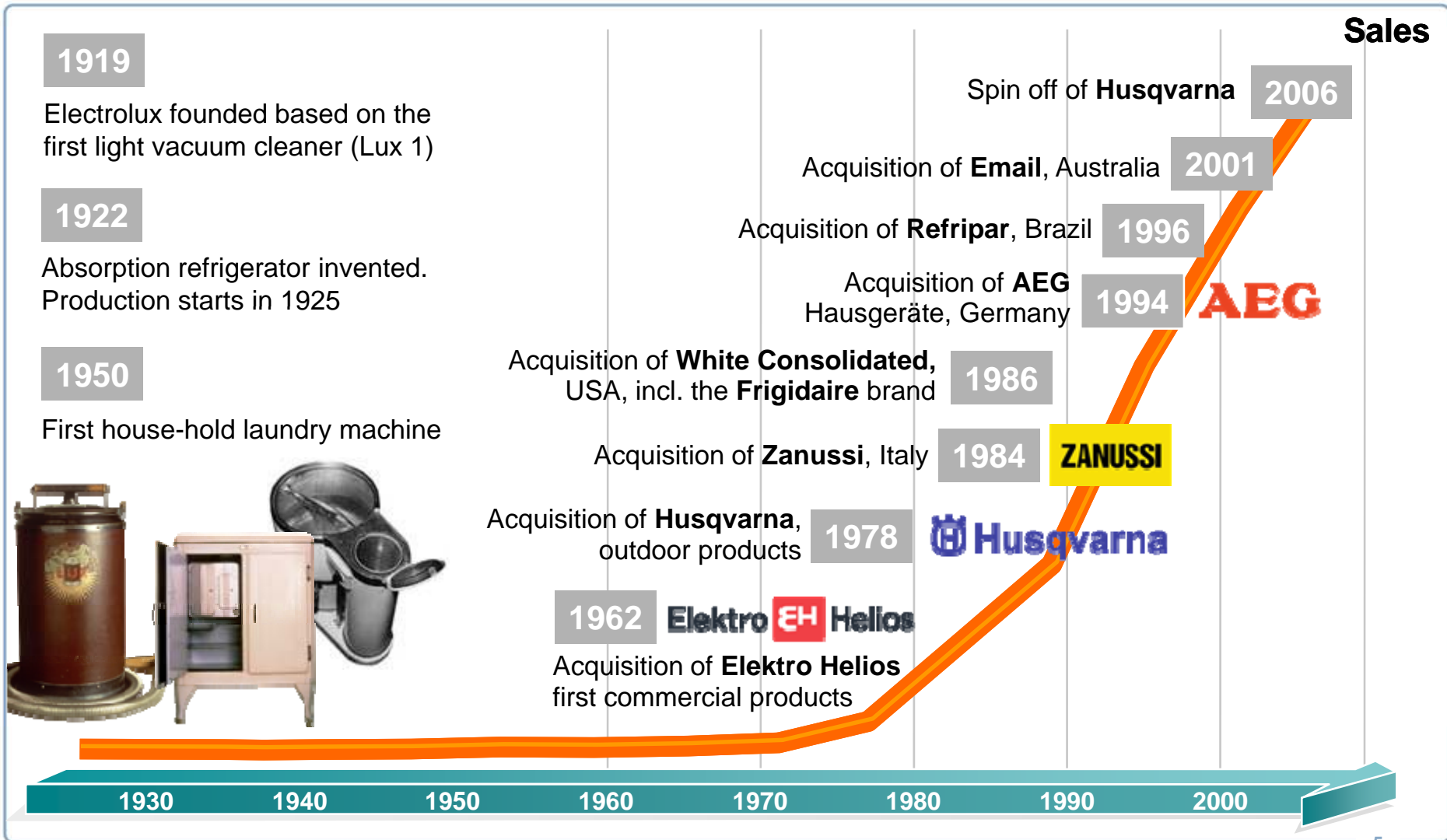
Appliances provides sustainable living

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A history of innovation and growth

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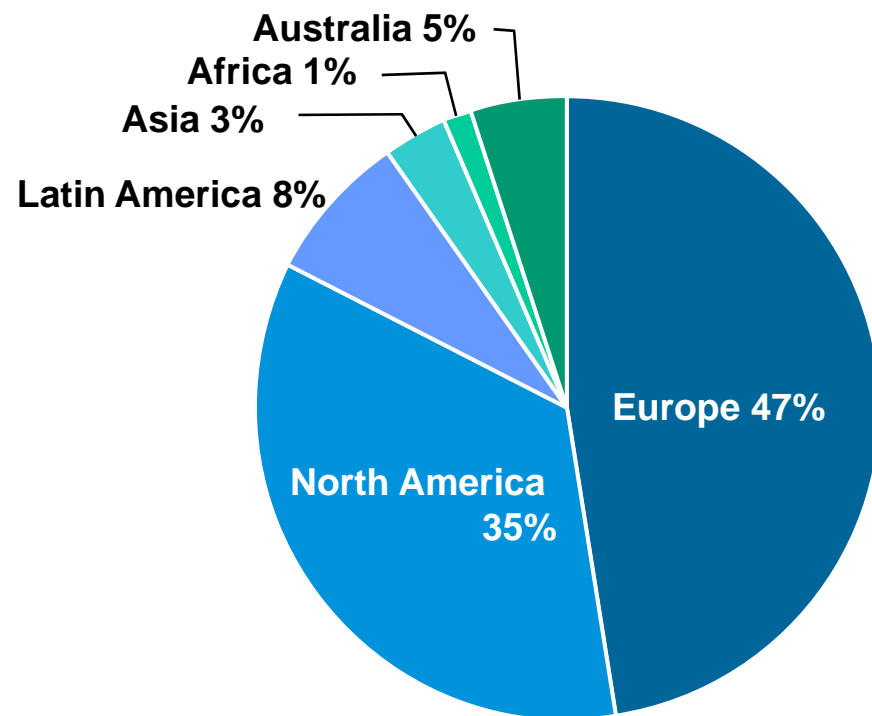


Our business

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	Food preparation/ kitchen business	6.5 M units
	Food preservation	13.5 M units
	Dish care	3.3 M units
	Fabric care	5.2 M units
	Floor care	9.4 M units
	Professional - Food service - Laundry systems	0.2 M units

**Sales in 2007: SEK 105 bn
Euro 11 bn**



Food preparation / Kitchen business

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- Market position: Largest manufacturer in the world
- Units sold: 6.5 million globally
- Provides different ranges for different cultures



Food preservation

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- Market position: No. 1 or 2 in Europe, US and Australia/New Zealand
- Units sold: 13.5 million globally
- Energy savings and environmental values guiding



Dish care

Thinking of you
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- Market position: No. 2 in the world
 - no. 2 in Europe
 - no. in North America and
 - no. in Australia
- Units sold: 3.3 million globally



Laundry products

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- Market position: One of the world's largest manufacturer of front-load laundry
- Units manufactured: 9.6 million globally
- Electrolux developed the first energy class A tumble dryer with heat pump



All figures as of 2007

Electrolux Professional

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- Among the largest manufacturers globally in both Food Service and Laundry Systems
- Own units manufactured: 219,000
- Customers include Hyatt, Starwood, Mandarin Hotels, Four Seasons, Intercontinental, Hilton and Radisson



Floor-care products

Thinking of you
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- Market position:
 - no. 1 in Europe, Australia and Brazil
 - no. 3 in US.
- Units sold: 12.9 million globally
- Electrolux is the most global floor care company



All figures as of 2007

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Sustainability at Electrolux

Thinking of you
 **Electrolux**

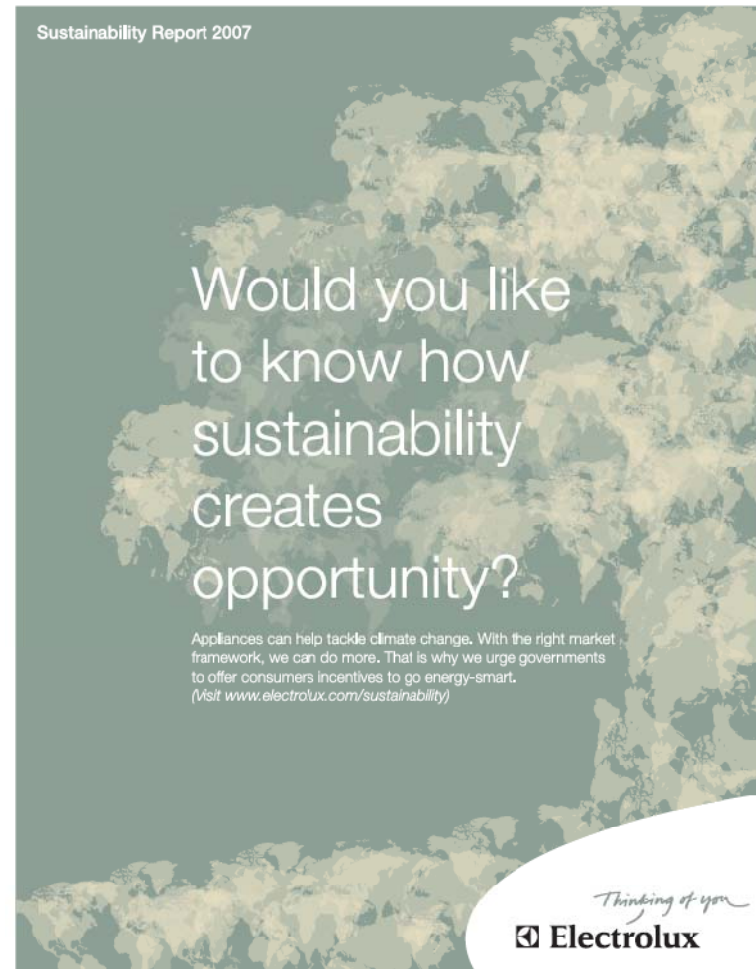
Sustainability



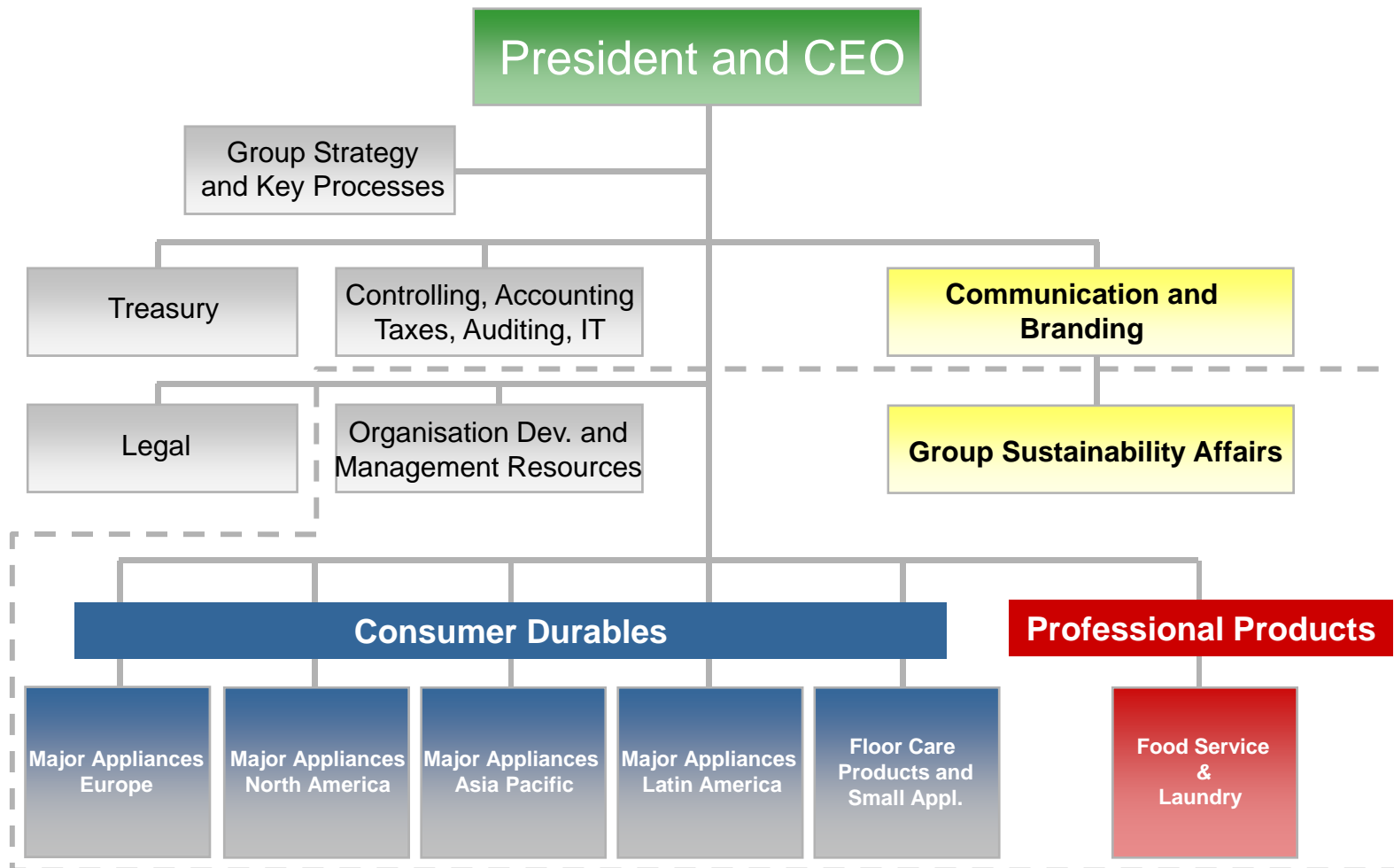
Corporate Sustainability

“A business approach to create long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social development”

- **Economic development**
- **Environmental protection**
- **Social responsibility**

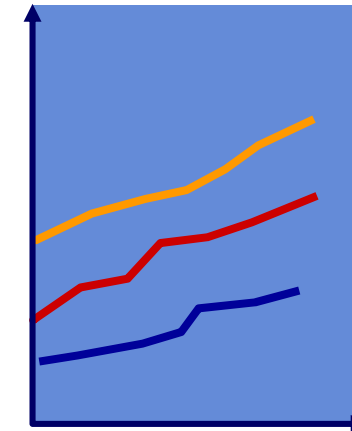
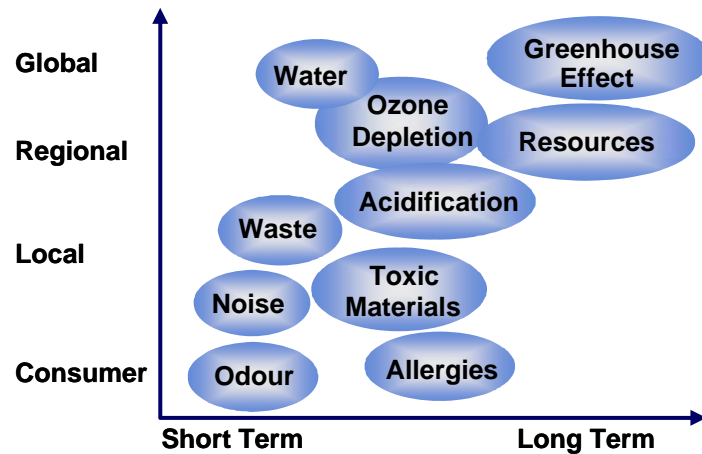


AB Electrolux Sustainability Organization



Electrolux environmental strategy

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Growing Populations
Growing Economies
Growing Resource Use

Regulations, treaties and legislation

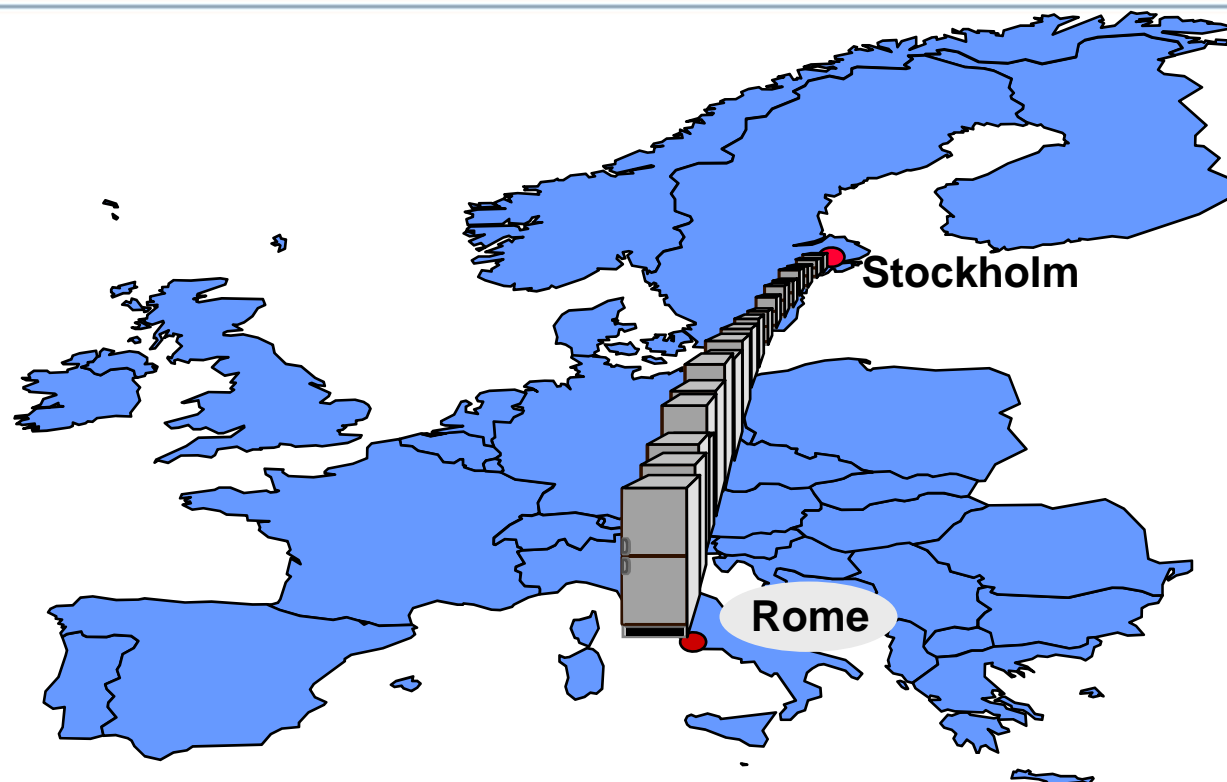
Resource efficiency (cost pressure)

Market awareness and demands

Environmental priorities

- Energy efficiency
- Resource efficiency
- Avoiding harmful materials

Impact of Electrolux refrigerator production in Europe



If you take all the cold products Electrolux produces during one year and put them in a row ...
..... then the line would stretch from Stockholm to Rome - 2 250 km.

We are consumer *insight* driven

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- We translate consumer insight into innovation that meets unmet and unconscious needs and wants
- Wide spectrum of tools:
 - Focus groups
 - Observation
 - Problem detection
 - Brand Scorecard
 - Clinics
 - Concept testing
 - Design testing
 - Price elasticity studies
 - Competitor analysis
 - Trend analysis
- Global segmentation - needs states
- Identified consumer needs mandatory for investment in product development



Developing products based on consumer insight

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Strategic
market plan

Identification
of consumer
opportunities

Primary
development

Product
development

Concept
development

Commercial
launch
preparation

Launch
execution

Range
management

Phase-out



Ergorapido – developed on the basis of consumer insight



Consumer problems:

Poor cleaning results
Poor quality
Noisy
Cleaning the filter is messy
New cleaning behaviors

- Design process initiated in Sweden
- Production facility in China investigated
- Package design initiated

- 40% price premium
- Improved market position
- 800,000 units sold by December 2006

Strategic market plan

Identification of consumer opportunities

Primary development

Product development

Concept development

Commercial launch preparation

Launch execution

Range management

Phase-out

- Evaluation of Electrolux concept product – 6 focus groups
- Color study – 6 focus groups
- Test of packaging design – 4 focus groups
- Pricing study – 103 respondents

- 2nd generation Ergorapido launched in 2007
- More than 1.5 million units sold world-wide by December 2007



What is sustainable design?

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Tejo Remy's "recycled" chest of drawers for Droog Design.



The AWARE Chandelier place the low energy lamp, an energy-saving product that are often considered as something ugly and boring, in a new context and present it as something beautiful.



The Sensidry heat-pump tumble dryer from Electrolux, reducing energy consumption by 50%.



The woodstove from Philips reduces indoor air pollution and fuel consumption for the millions of families in the world's poorest regions.

Consumer expectations

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Consumers are expecting products that:

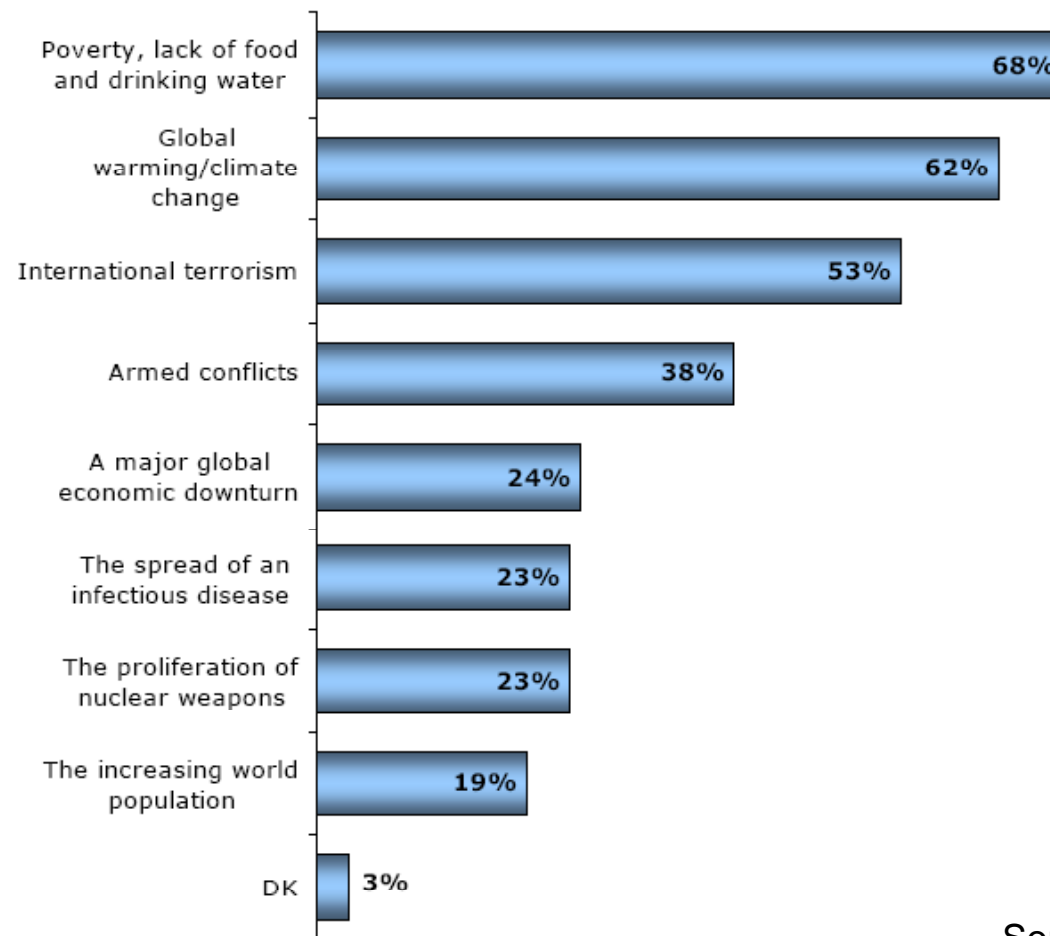
- are manufactured with low impact on the environment
- are efficient and have low impact on the environment
- are safe and does not contain hazardous materials
- are produced under acceptable working conditions



Consumers are willing to pay more for brands they know and trust

The most serious problem currently facing the world as a whole?

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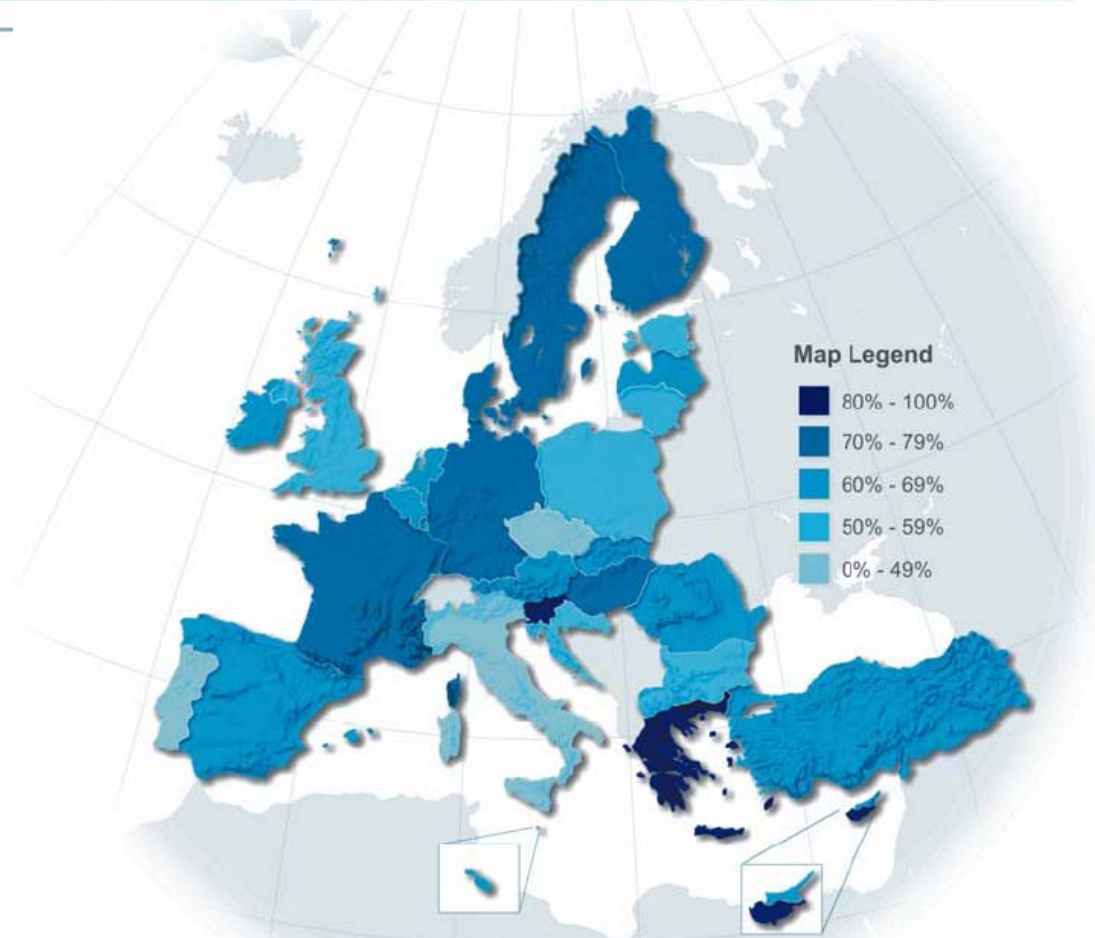


Source: Eurobarometer

“Global warming/climate change” is regarded as a serious problem

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CY*	92%
EL	90%
SI	80%
SE	74%
FI	73%
DK	71%
DE	71%
FR	71%
HU	71%
LU	69%
AT	69%
NL	66%
LV	66%
SK	66%
MT	64%
IE	63%
EU27	62%

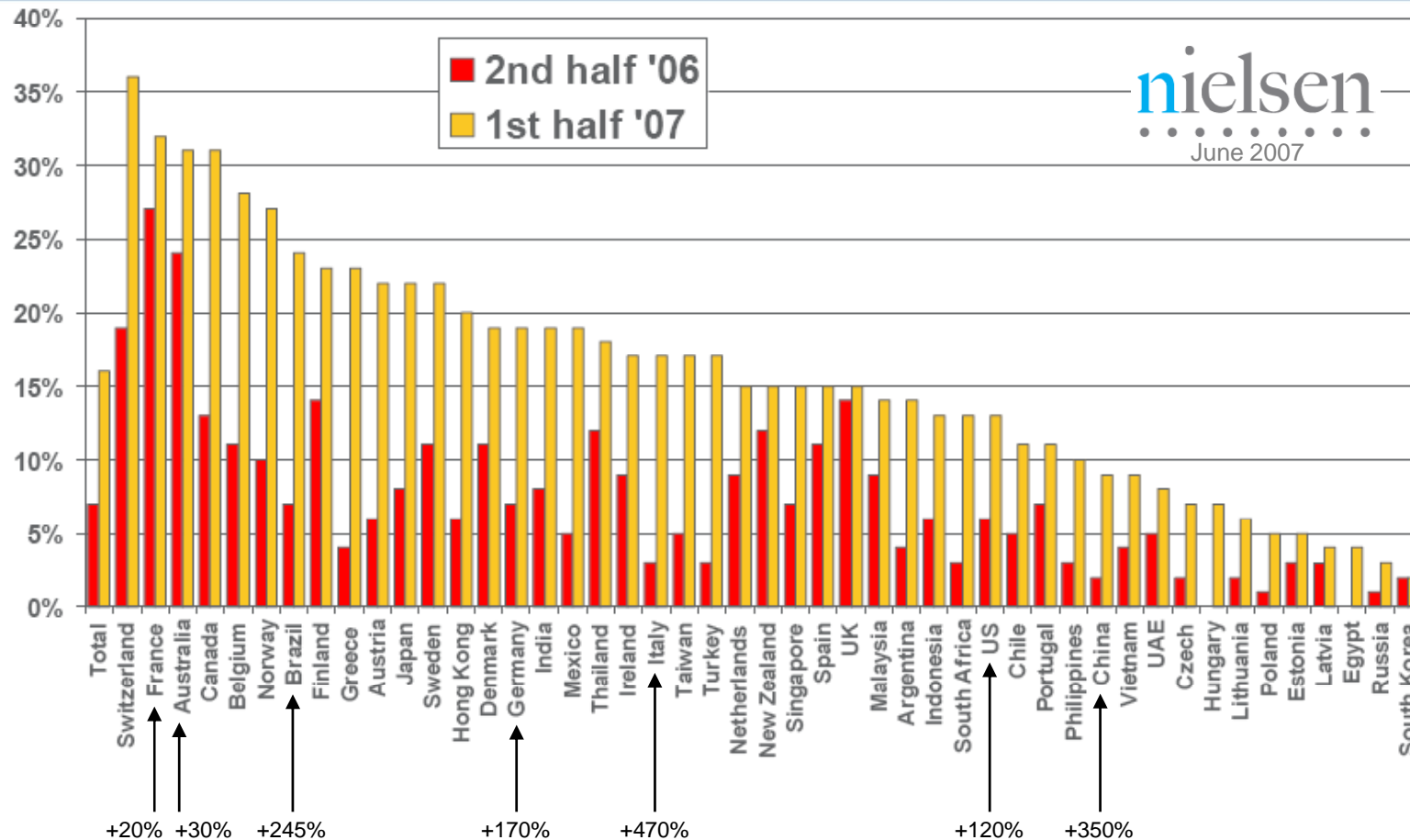


EU27	62%
BE	61%
ES	61%
RO	60%
EE	58%
LT	58%
UK	57%
BG	52%
PL	50%
IT	47%
PT	47%
CZ	45%
* CY(tcc) = 64%	
TR	60%
MK	59%
HR	54%

Source: Eurobarometer

Consumers on Global Warming - biggest 2 concerns

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Electrolux



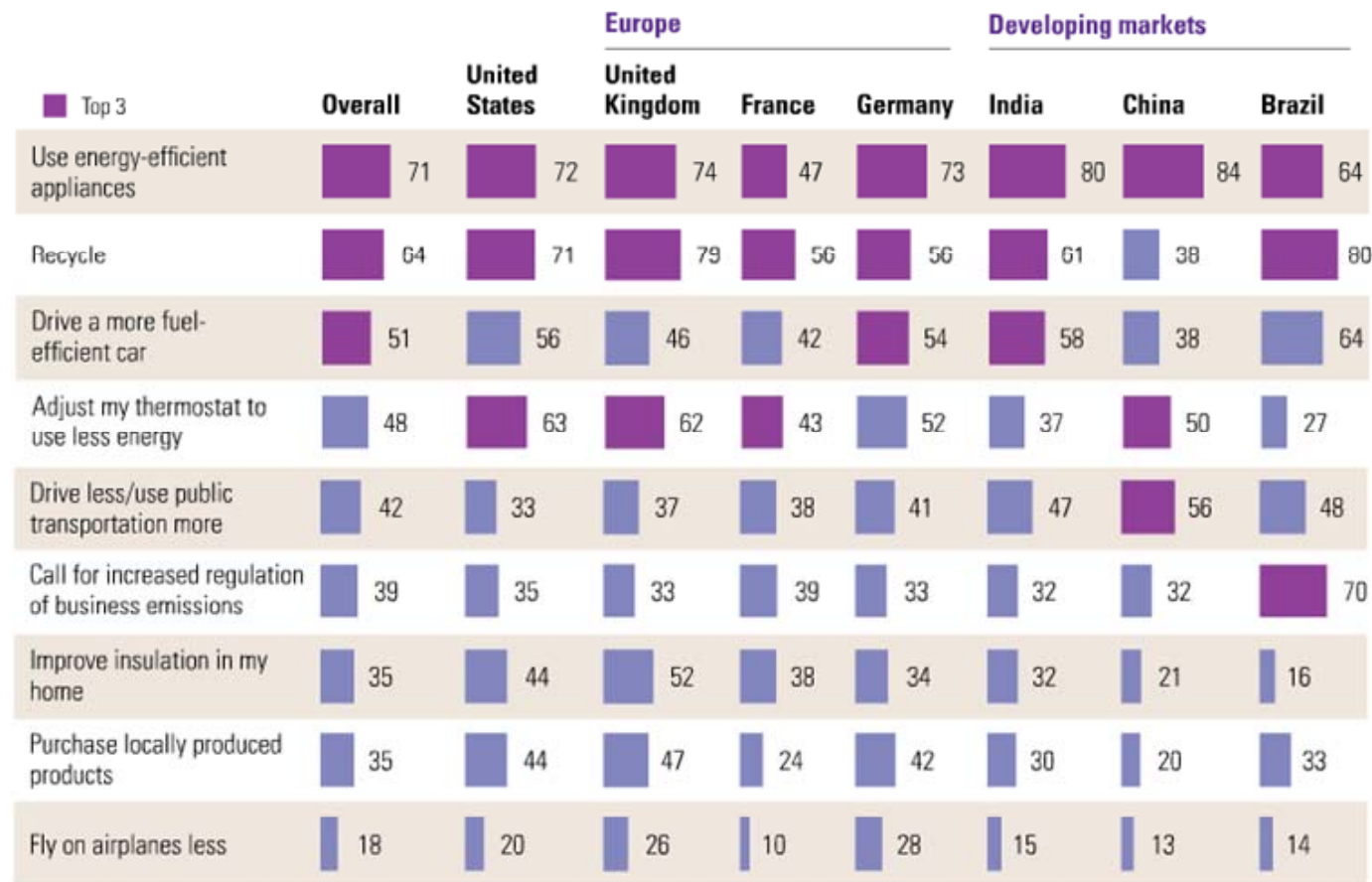
- The “global” concern has increased by 130% over the last 6 month
- The biggest contribution society can make
 - There should be a change to more energy efficient light bulbs and electrical appliances (21%)

McKinsey survey 2008

- consumer concerns about climate change

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Which of these would you personally be most willing to do to stop climate change?



Life Cycle Approach

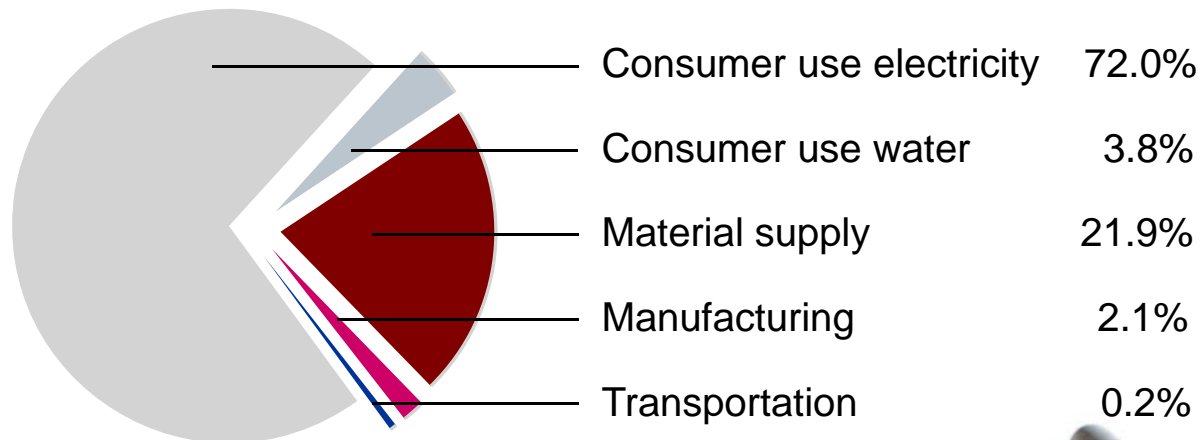
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Why to use LCA?

- Understanding the real impact
- Focus on important aspects
 - Use phase
- Communication tool
 - Business partners
 - Legislators
 - Other stakeholders

The life cycle impact

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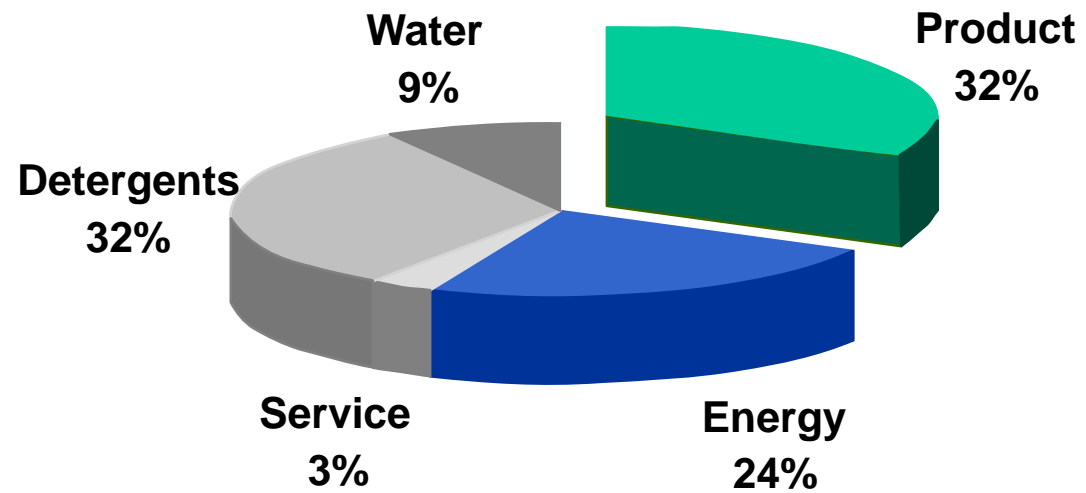


The product use dominates



The life cycle cost

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Long history of developing energy efficient appliances

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- The Nutek procurement
Cold appliances
Sweden 1990-1992
- IEA DSM Award
Tumble dryers
The Netherlands 1998
- The Integration cooker
Sweden 2000-2001
- Energy Plus program
Cold appliances
Europe 1999-2004



Environmental saving potential with best available product

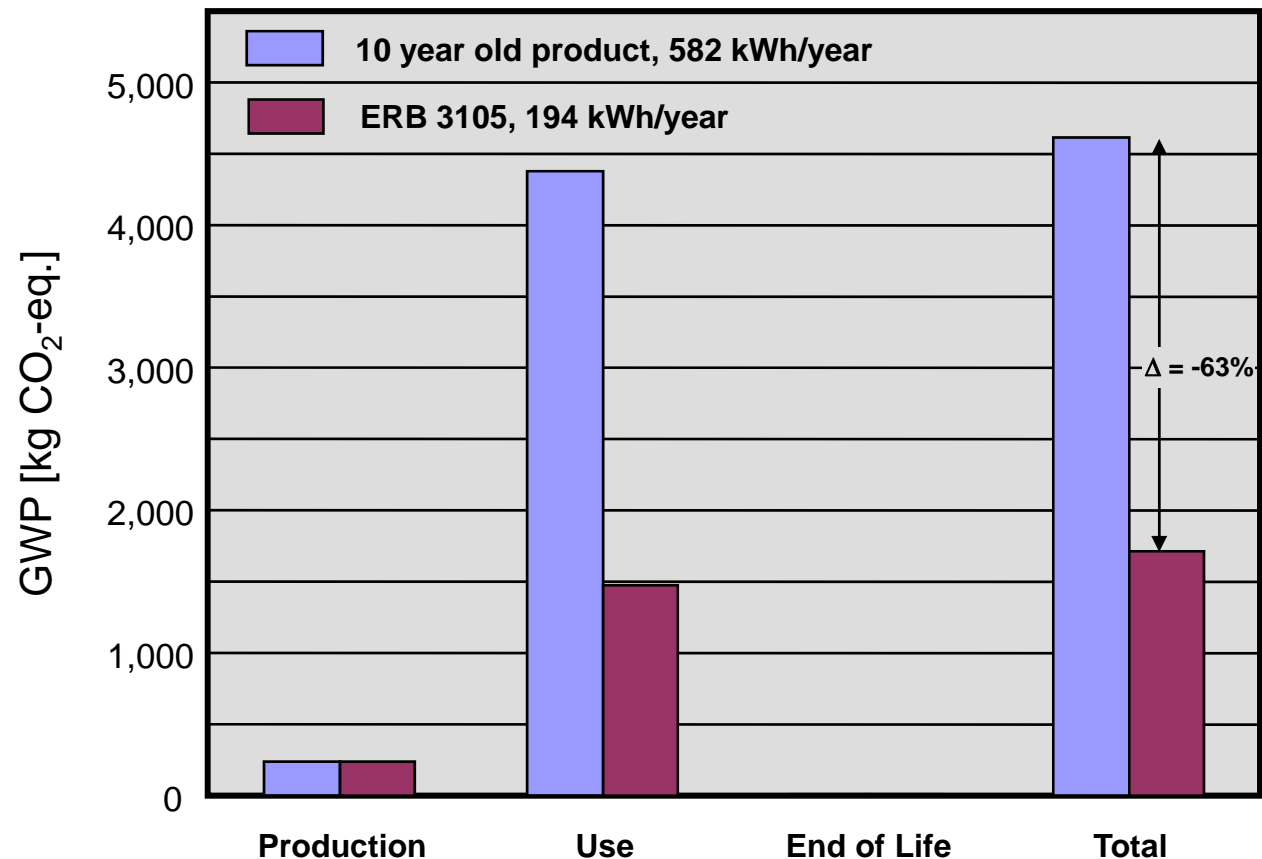
Thinking of you
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Comparison between refrigerator/freezer over 15 years



Electrolux ERB 3105

Energy  winner

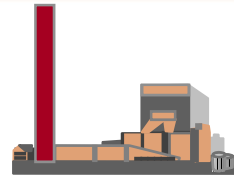


Energy, emissions and resources

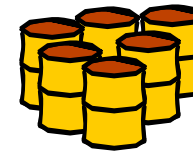
Thinking of you
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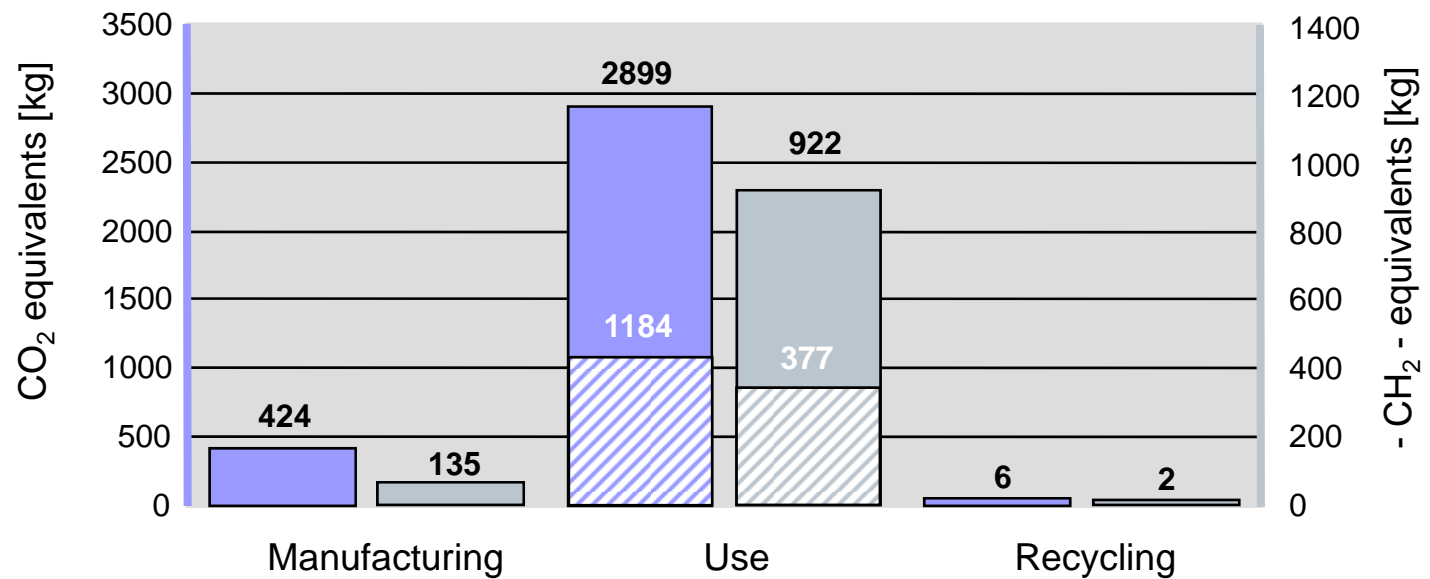
~9000 kWh



~ 3 ton of CO₂



~ 1 ton of -CH₂-
e.g. gas or coal

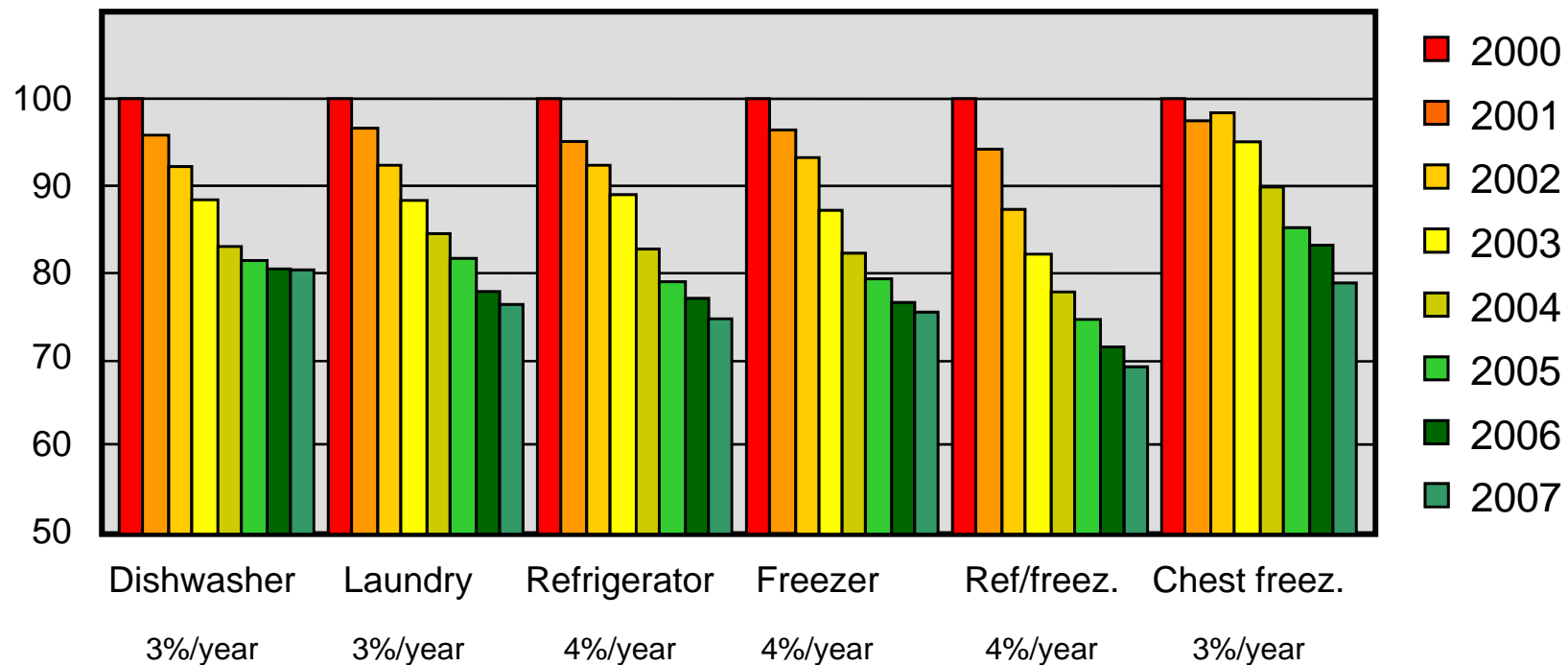


Refrigerator/freezer in Energy Class B (475 kWh/year). 17 years lifetime. European electricity mix.

Electrolux fleet average 2000 – 2007 in Europe



Reference year 2000 = 100%



Electrolux experience with LCA

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Certified Environmental Product Declaration

- Electrolux first company in its sector to make EPD
- High general interest but low response from business perspective

Electrolux



CERTIFIED ENVIRONMENTAL PRODUCT DECLARATION FOR ERB3105

Product description

The fridge/freezer ERB3105 is a low energy product with an energy consumption of 0.33 kWh/day. Inside, the refrigerator has glass shelves, one shelf for bottles. It also contains fruit/vegetable drawers and door shelves in transparent plastic. The freezer section contains four transparent drawers. The fridge/freezer contains a temperature display, a sound/light alarm, and automatic defrost in the fridge section.

Model	ERB3105
Storage volume (fridge/freezer) ¹	192+92 liters
Width	595 mm
Height	2000 mm
Depth	600 mm
Energy efficiency class ²	A
Energy consumption ³	194 kWh/year 0.532 kWh/day
Noise ⁴	40 dB(A)
Refrigerant	Isobutane R600a
Blowing agent	Cyclopentane

Material declaration

The weight of the product is 93 kg and consists of the materials:

Material content

Metals	
• Steel	60%
• Copper	2.8%
• Aluminum	1.9%
Plastics	
• Insulation (Pur)	10.5%
• Other plastics	16.1%
Glass	5.8%
Blowing agent	0.4%
Refrigerant	0.2%
Electronic components	0.6%
Other	1.7%

This fridge/freezer is a complete PVC-free product.

15% of the steel on the doors and cover is pre-painted and 85% of the steel is powder coated. The metals are not surface-treated with Cd, Cr or Ni. The metal coatings contain no pigment or additives based on Cd, Cr, Pb or Hg or their compounds. The plastics do not contain Cd, Pb, Hg or their compounds.



Manufacturer

The product is manufactured by AB Electrolux in Mariestad, Sweden. The manufacturing plant is certified according to the environmental management system ISO 14001. LCA data for the manufacturing plant in Mariestad covers 2000.

Contact person for the environmental declarations, Italy:
Marirosa Bignotti, Electrolux Zanussi Italia S.p.A.

Tel: +39 0434 393830

Fax: +39 0434 394062

For more information about AB Electrolux see the Internet, www.electrolux.com

Electrolux experience with LCA

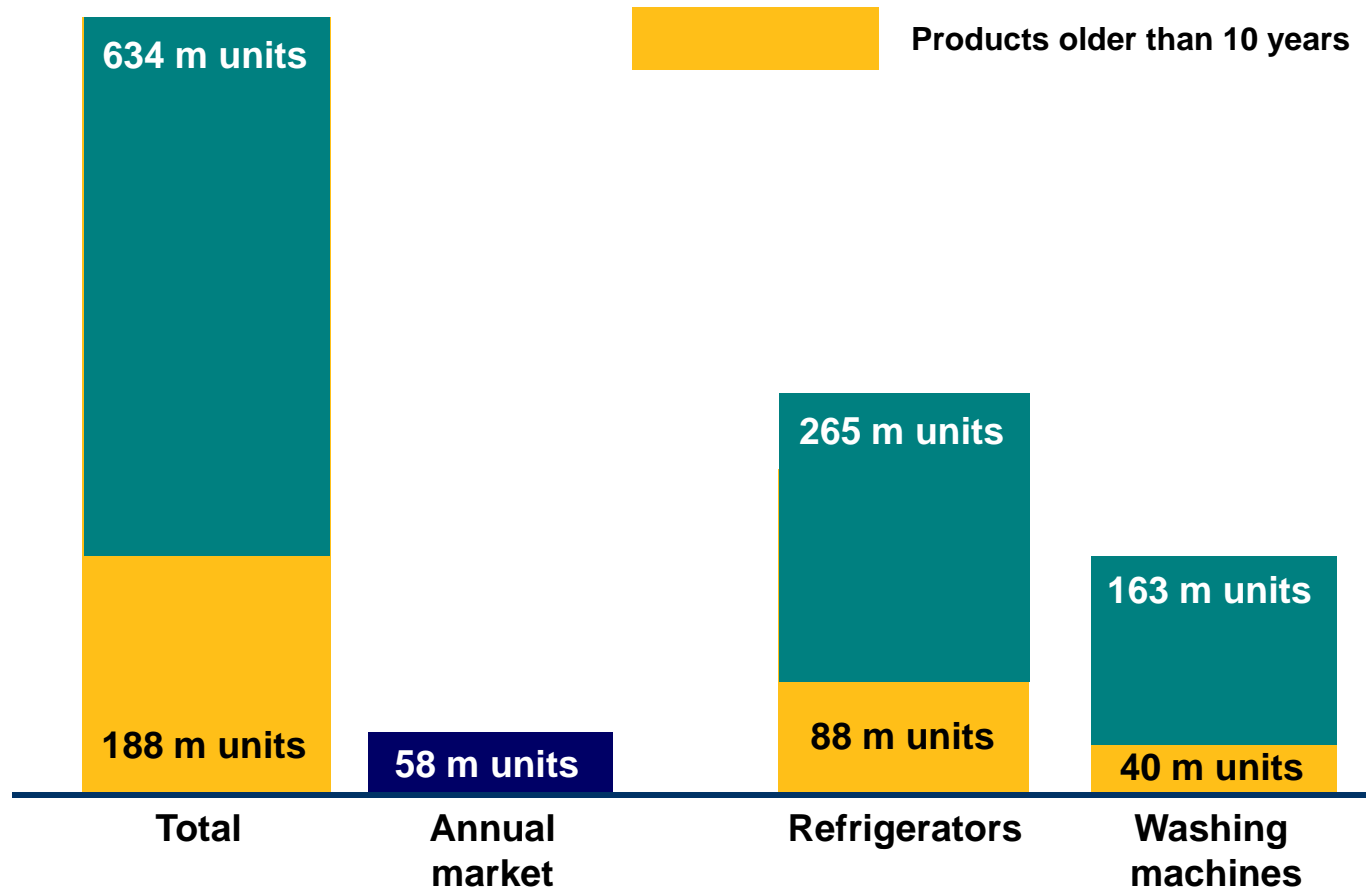


Study from Öko Institut to evaluate environmental and financial benefit of early replacement of appliances

- Results: high environmental benefit, long payback time
- Used to show needs of financial incentives for early replacement

The untapped potential - outdated appliances

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Huge potential for savings

- **44 TWh electricity**
- **22 Mtons CO₂**
no longer released into the atmosphere,
i.e. 6% of original Kyoto targets for EU



11 thermo-electric plants

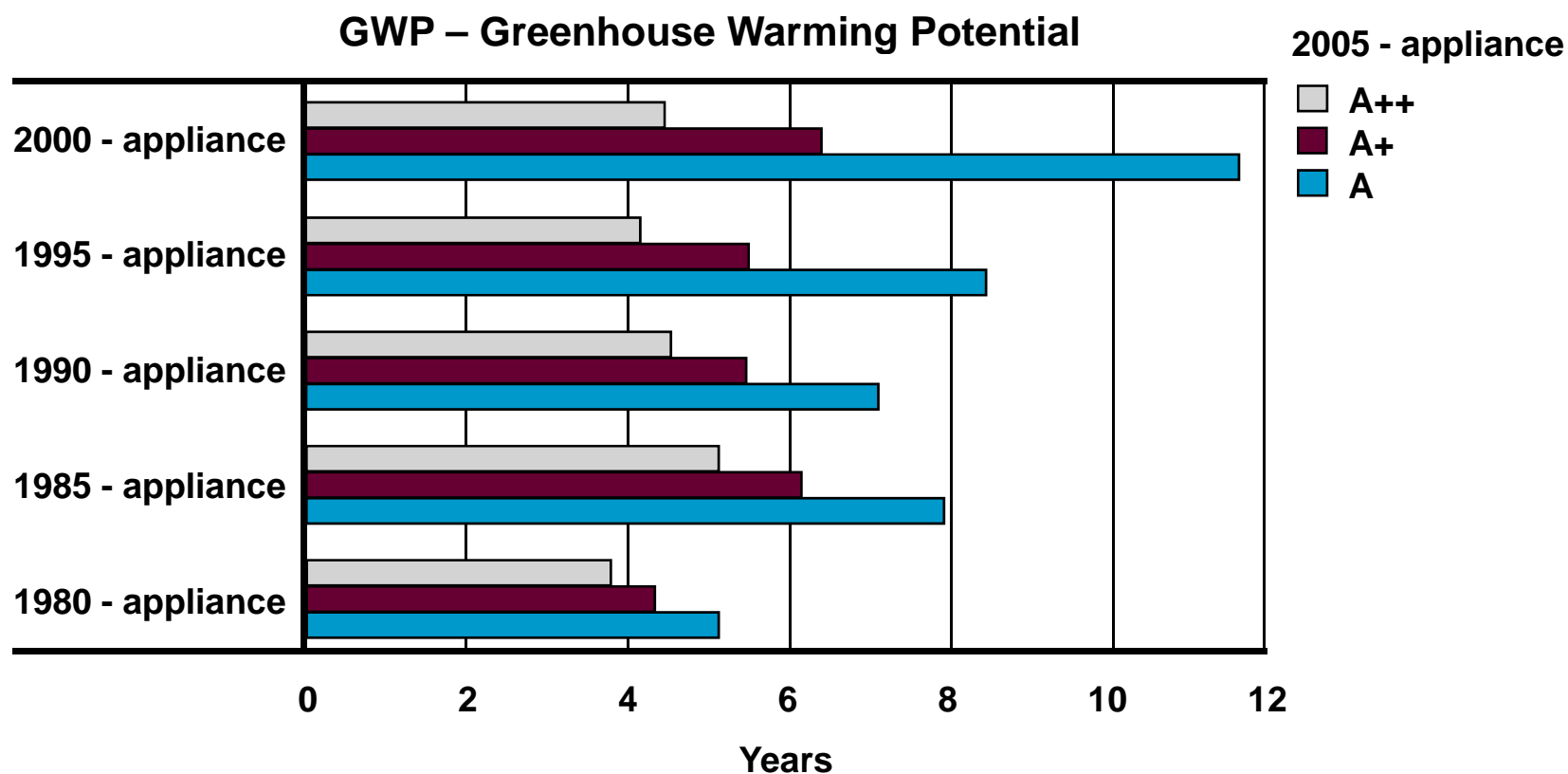


6 million cars

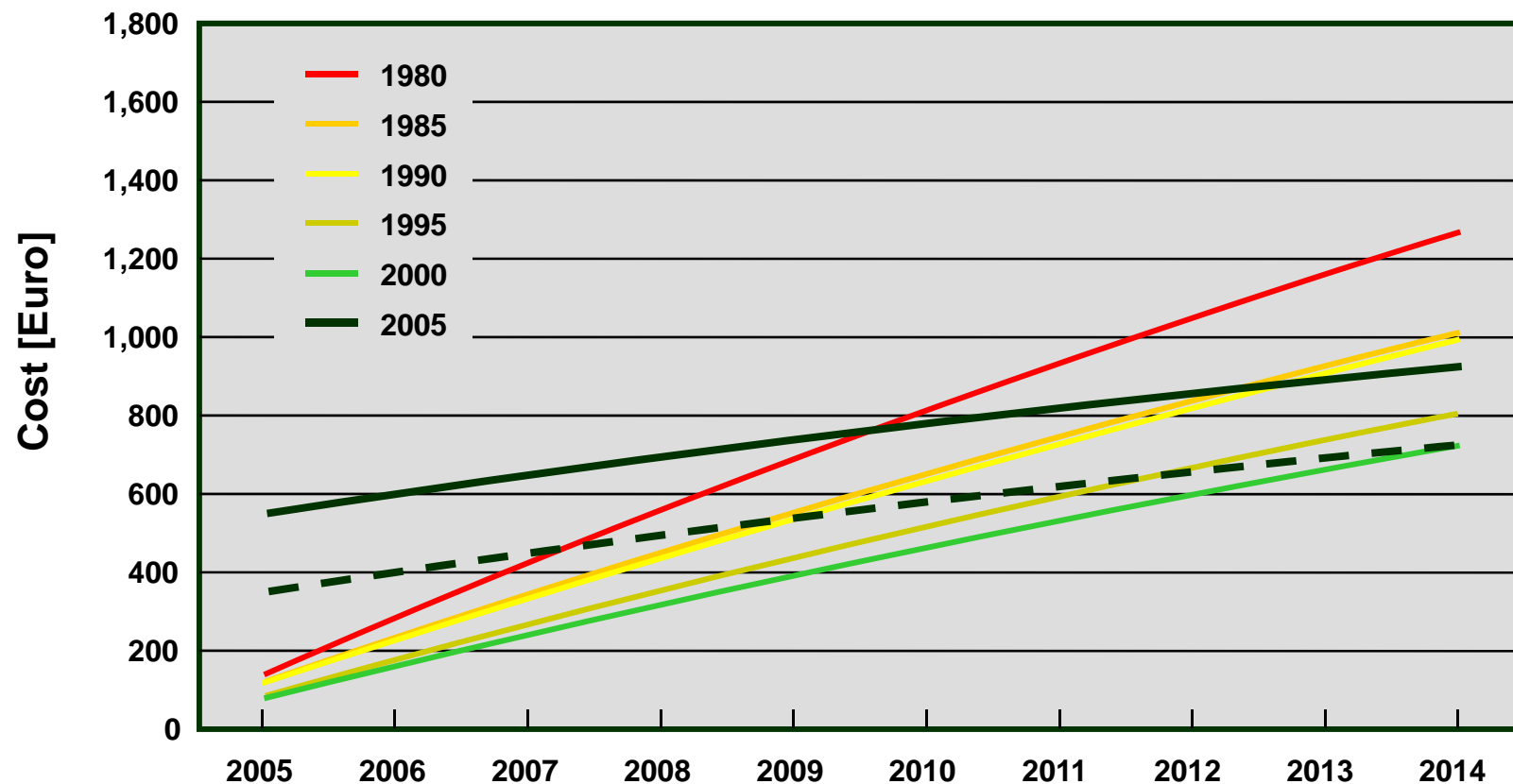
Payback periods fridge-freezers GWP

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Öko-Institut e.V.
Institut für angewandte Ökologie
Institute for Applied Ecology



Economic break-even points Cumulated cost fridge-freezers



"Environmental and economic evaluation of the accelerated replacement of domestic appliances", June 2005

The background of the slide is a close-up photograph of water. It features numerous small, clear bubbles of varying sizes scattered across the surface. Concentric ripples from an unseen point of impact are visible, creating a sense of movement and texture. The overall color palette is a range of blues, from light sky blue to deeper, darker tones.

Electrolux' response to climate change

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3-pronged climate program

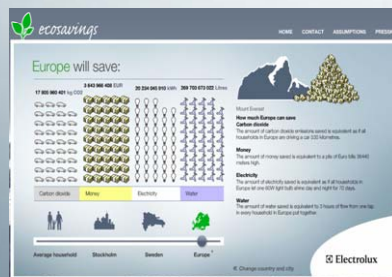
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Cut energy use in operations



Promote green range of products



Raise awareness on the role of energy-efficient appliances

Reducing energy consumption in operations

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-15%

- Target date end of 2009
- reference year 2005
- Setting a new target for 2012

The Green Range of products

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- Induction
- Energy class A for oven
- Low stand by
- Energy class A or B
- Delay start
- Low stand by
- Energy class A+ or A++
- HC refrigerant & insulation gas
- Label AAA
- Low noise 43 dB(A)
- Energy efficient - 30%
- Recycled materials ~55%
- Low noise 71 dB(A)
- Label A+AA
- Delay start
- Low stand by



Savings for Madrid

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[HOME](#) [CONTACT](#) [ASSUMPTIONS](#) [PRESSKIT](#)

Your **city** will save:

89 044 442 kg CO₂



Carbon dioxide

13 379 163 EUR



Money

101 186 866 kWh



Electricity

1 611 845 101 Litres



Water



Average household



Madrid



Spain



Europe*

How much Madrid can save

Carbon dioxide

The amount of carbon dioxide emissions saved is equivalent as if all households in the city are driving a car 526 kilometres.

Money

The money saved in the city is equivalent to a stack of Euro coins 30772 meters high.

Electricity

The amount of electricity saved is equivalent as if all households in the city let one 60W light bulb shine day and night for 69 days.

Water

The amount of water saved is equivalent to 4 hours of flow from one tap in every household in the city put together.



Eiffeltower

Electrolux

« Change country and city

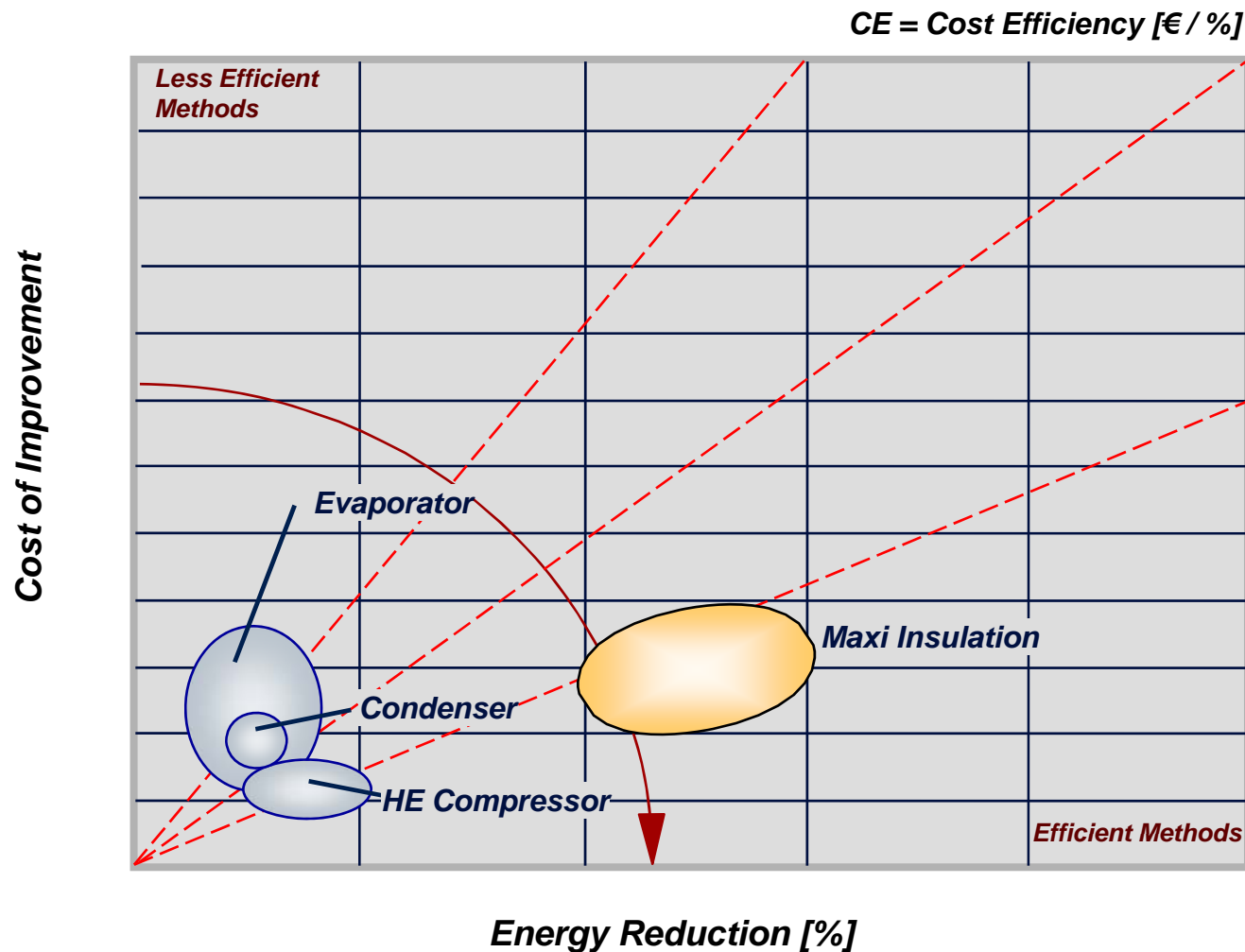
The background of the slide is a close-up photograph of water. It features numerous small, clear bubbles of varying sizes scattered across the surface. Concentric ripples from larger droplets are visible, creating a textured, undulating pattern. The overall color palette is a range of blues, from light sky blue to deeper, muted tones.

Products and Environment

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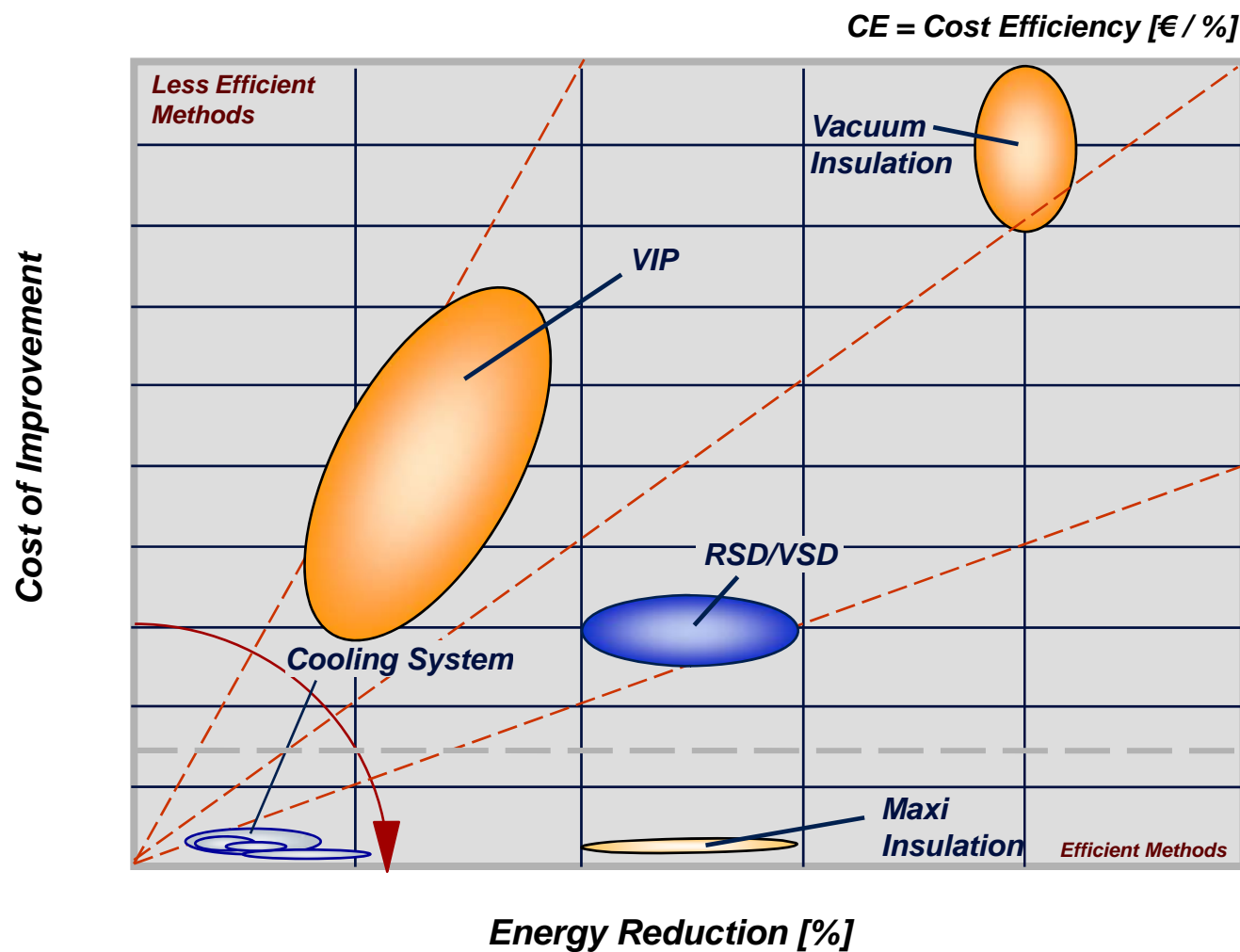
1st Generation of Energy Efficiency Technologies

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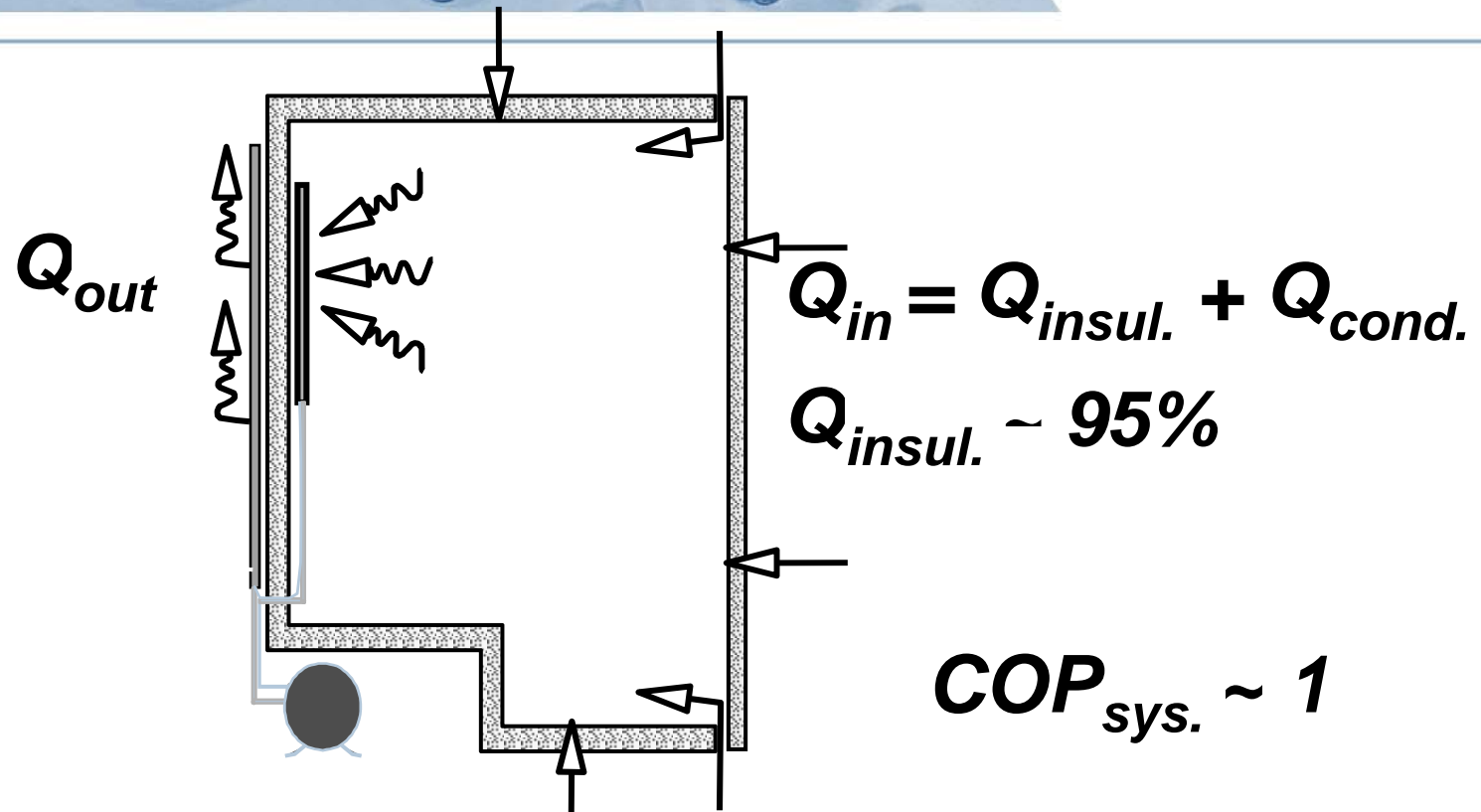
2nd Generation of Energy Efficiency Technologies

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Heat Flow Balance in a Refrigerator

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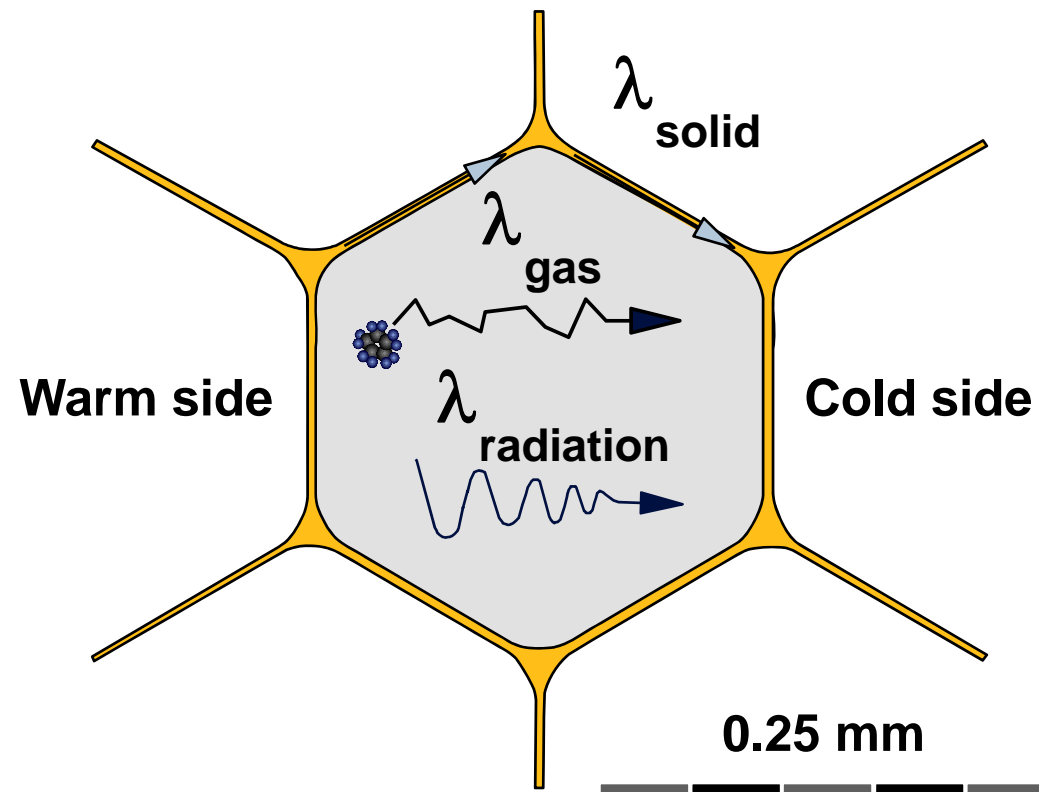


The heat leakage through the insulation is approx. equal to the energy consumption.

The Heat Flow through a Foam

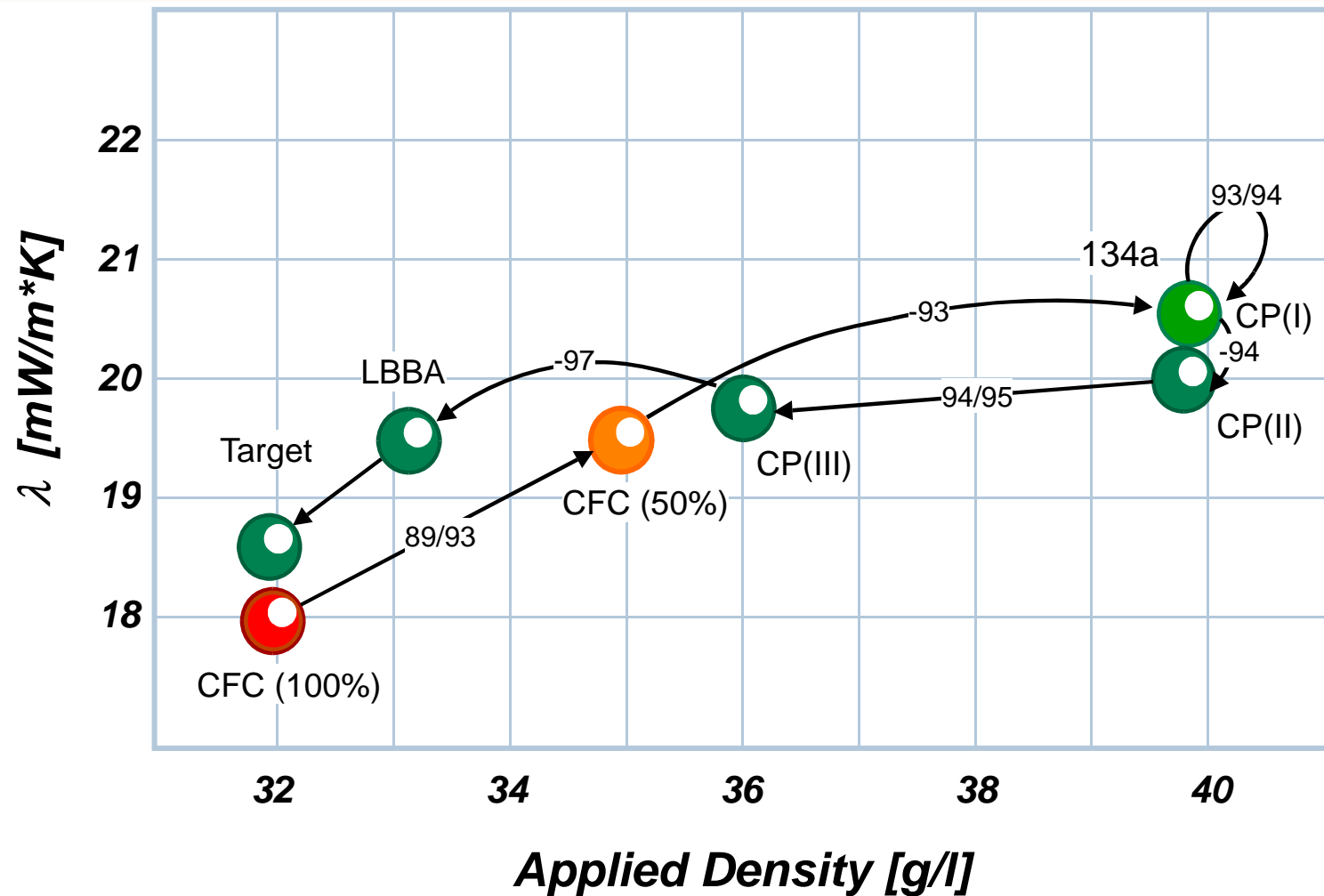
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$$\lambda_{\text{total}} = \lambda_{\text{solid}} + \lambda_{\text{gas}} + \lambda_{\text{radiation}} + \lambda_{\text{gas, conv.}}$$



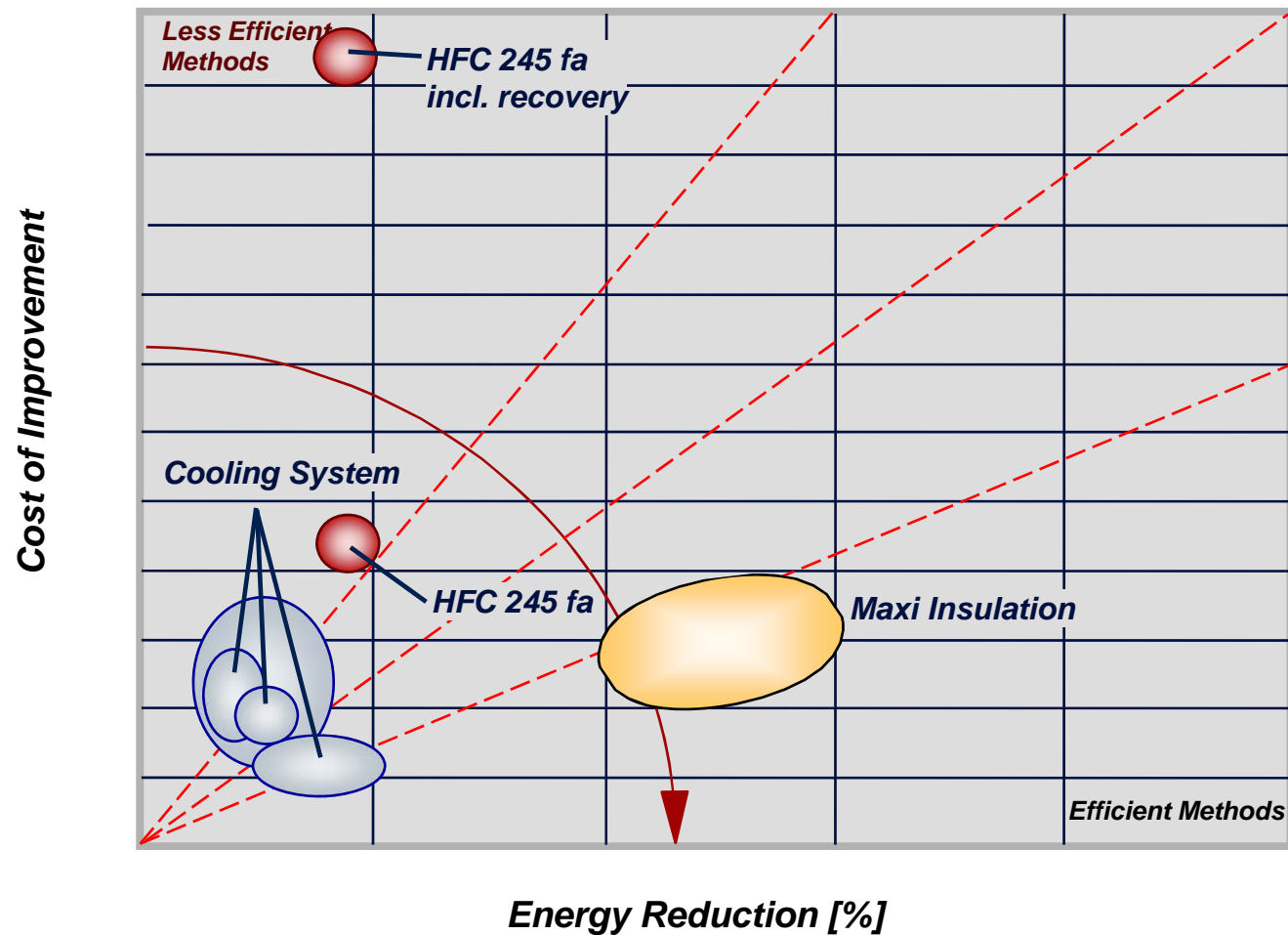
PU Foam Development

Thinking of you
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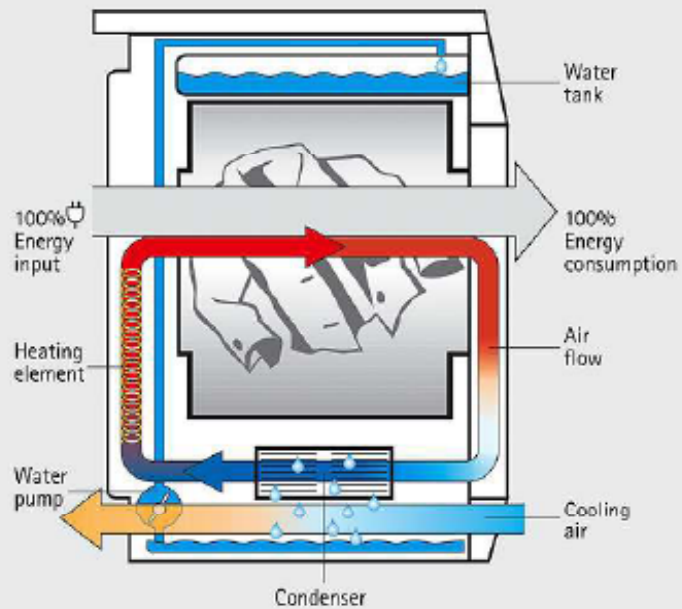


Energy Efficiency Technologies

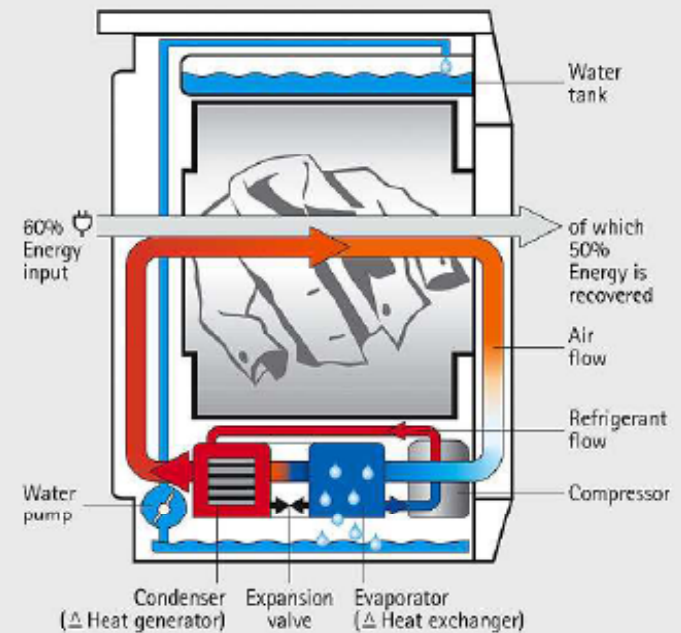
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Dryer EDH97950WA



Traditional condense dryer



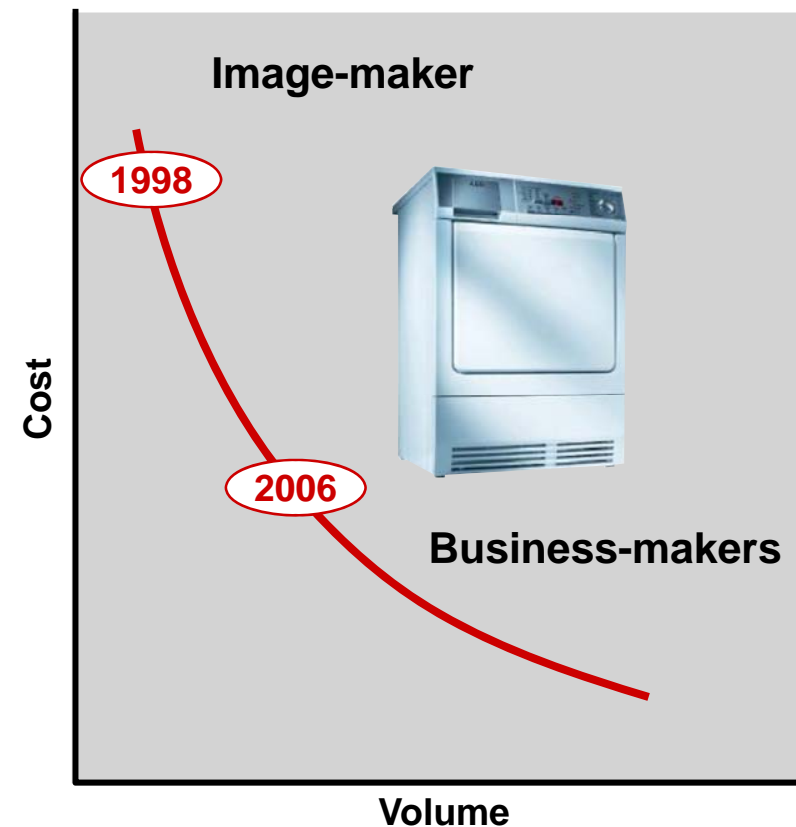
Heatpump dryer

Reasons for participation

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- Electrolux environmental strategy
- Product development
 - preparedness for new technologies
- Customer relations
- Sales support
 - create interest
- Market visibility and publicity
- Electrolux corporate image

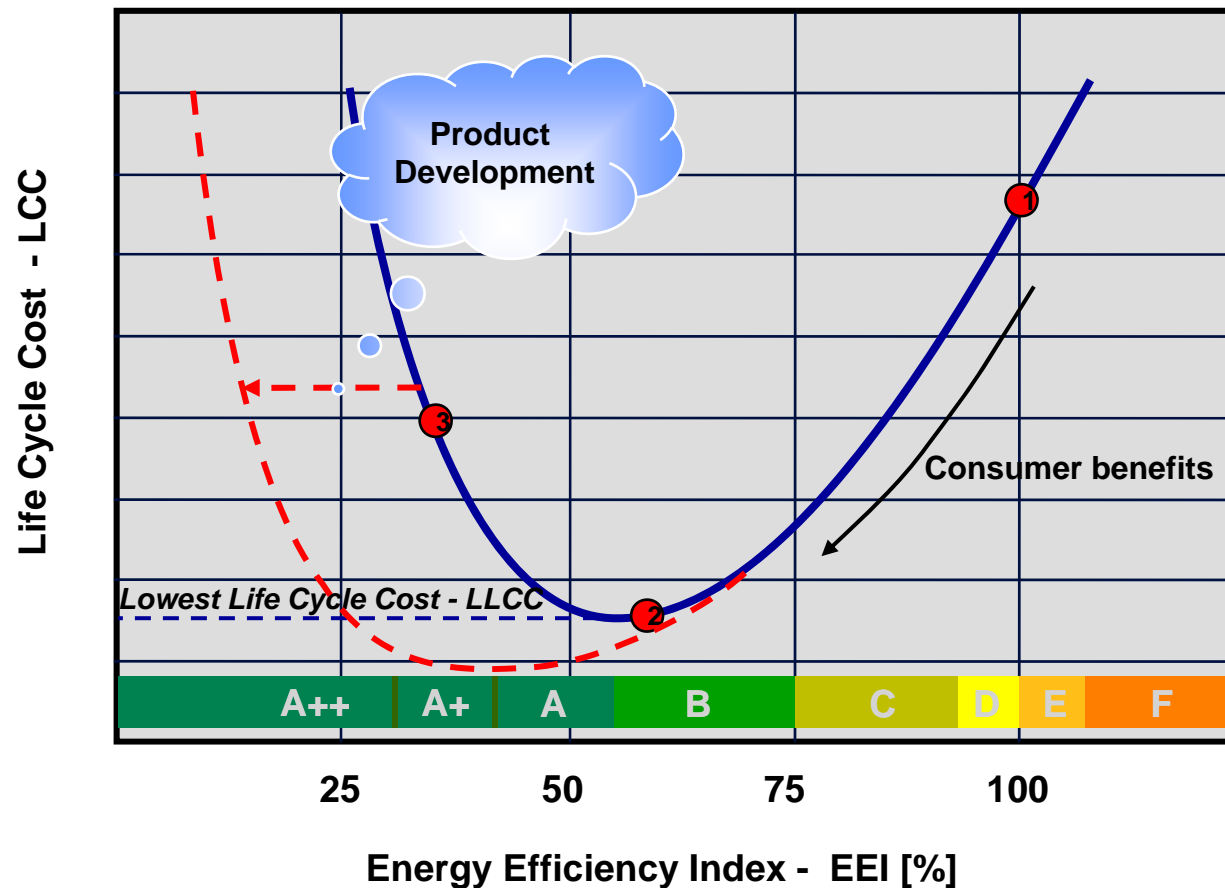
Electrolux heat pump dryer



Life cycle cost optimisation

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- ① Average refrigerator performance 1992
- ② Lowest Lifecycle Cost product
- ③ ERB 3105, Energy+ program (EEI = 32%)



Cooking appliances

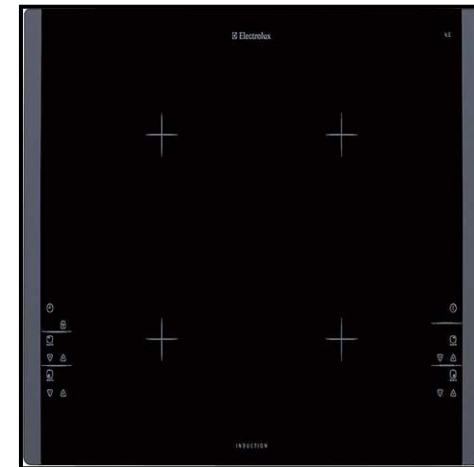
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Induction cook tops

- 30 to 50% savings compared to hot plates
- 15 to 40% savings compared to ceramics

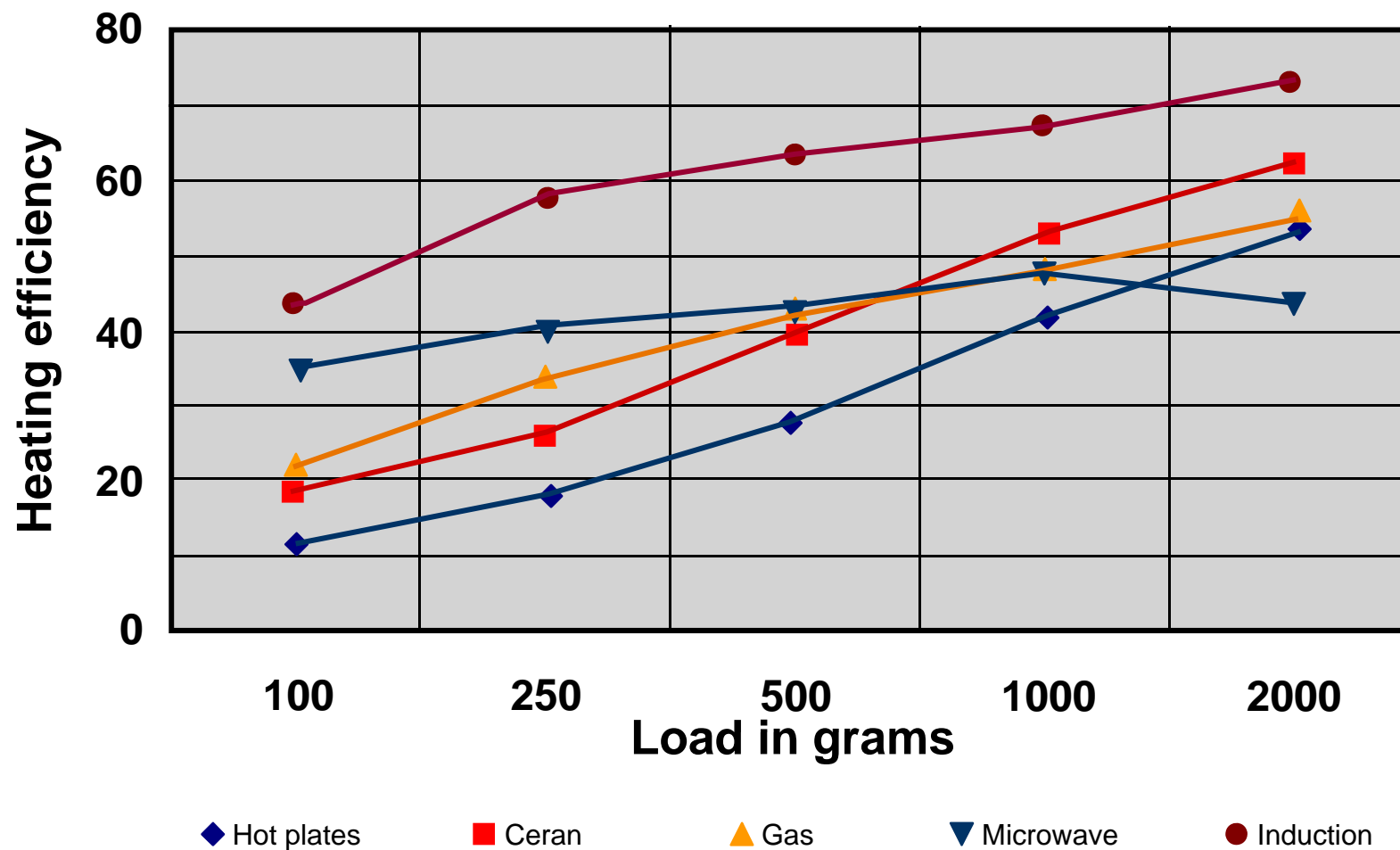
Ovens

- Almost all ovens available in energy class A
 - 10 to 20% more efficient than B class
- Convection
 - saving 5% in energy
 - could use two baking plates simultaneously
- Steam oven
 - saving 10% in energy
- Emission free insulation



Efficiency of cooking appliances

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air-o-steam ovens

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Highly efficient gas burners

- saving up to 20% of gas consumption
 - lowest CO2 and NOX emissions
 - improved working environment
- ⇒ saving of 300 euro per year
compared to a regular blown burner combi-oven



Ultrasilencer Green

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Energy efficient
1250W



- 1250 W motor – 33% lower energy
- dust pick-up as an average +2000W cleaner

2 of 3.5 kg
recycled plastic



- 55% recycled black plastic
- 56% recycled paper packaging material
- 93% can be recycled

Low
noise



- Low "noise - 71 dB(A)



Restricted materials in products - RoHS compliance



Policy

- proactively participated in the development of legislation

Organization

- a central office
- coordinators in all relevant functions
- internal material/test competence

Compliance methodology

- legal binding supplier self declarations from all suppliers
- material verification tests of representative samples of all parts
- OEM suppliers audited on their processes

Test program

- Introduced an extensive test program
- component selection based on chemical and statistical know-how

New article number (ANC) and product number codes (PNC)



Restricted Materials List - RML

Purpose with the Restricted Materials List:

- Meet consumers expectation
- Legal compliance, e.g. REACH
- Meet customer requirements
- Preparedness for future requirements, legal or self-imposed
- Clear communication internally and externally (e.g. communicated to suppliers)

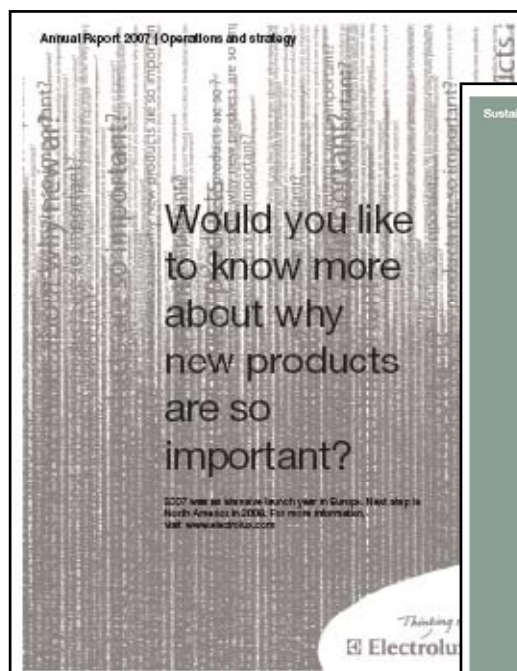


Requirement for all suppliers to Electrolux

Banned materials: Not present in Electrolux products

Restricted materials: Only used for exemptions (regional, applications)

Substance of concern: To be used with caution



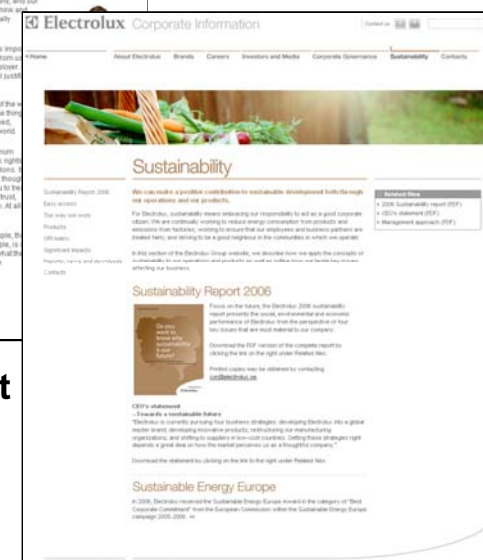
**Annual Report 2007
Sustainability**



**Sustainability Report
2007**



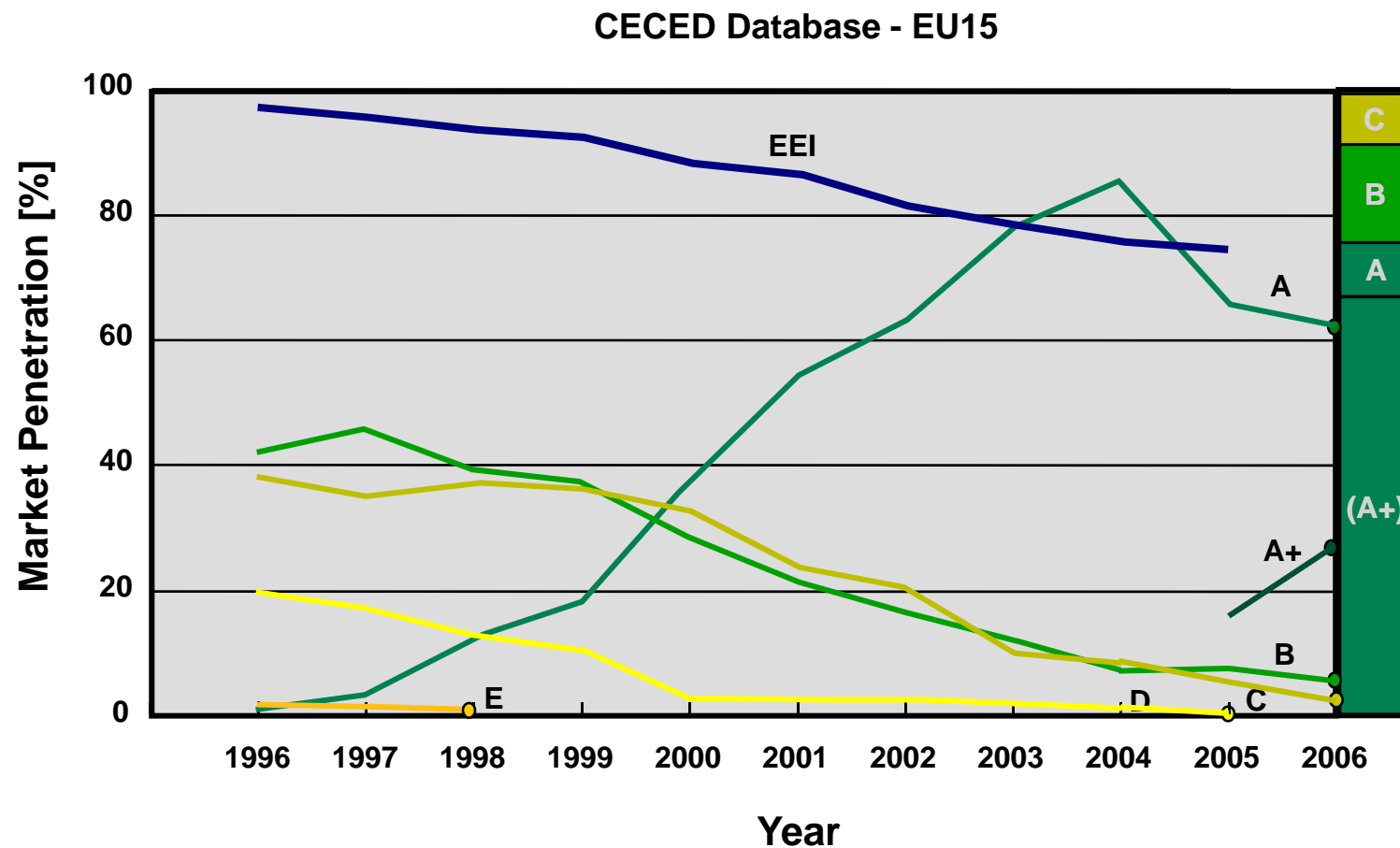
E-gate on Intranet



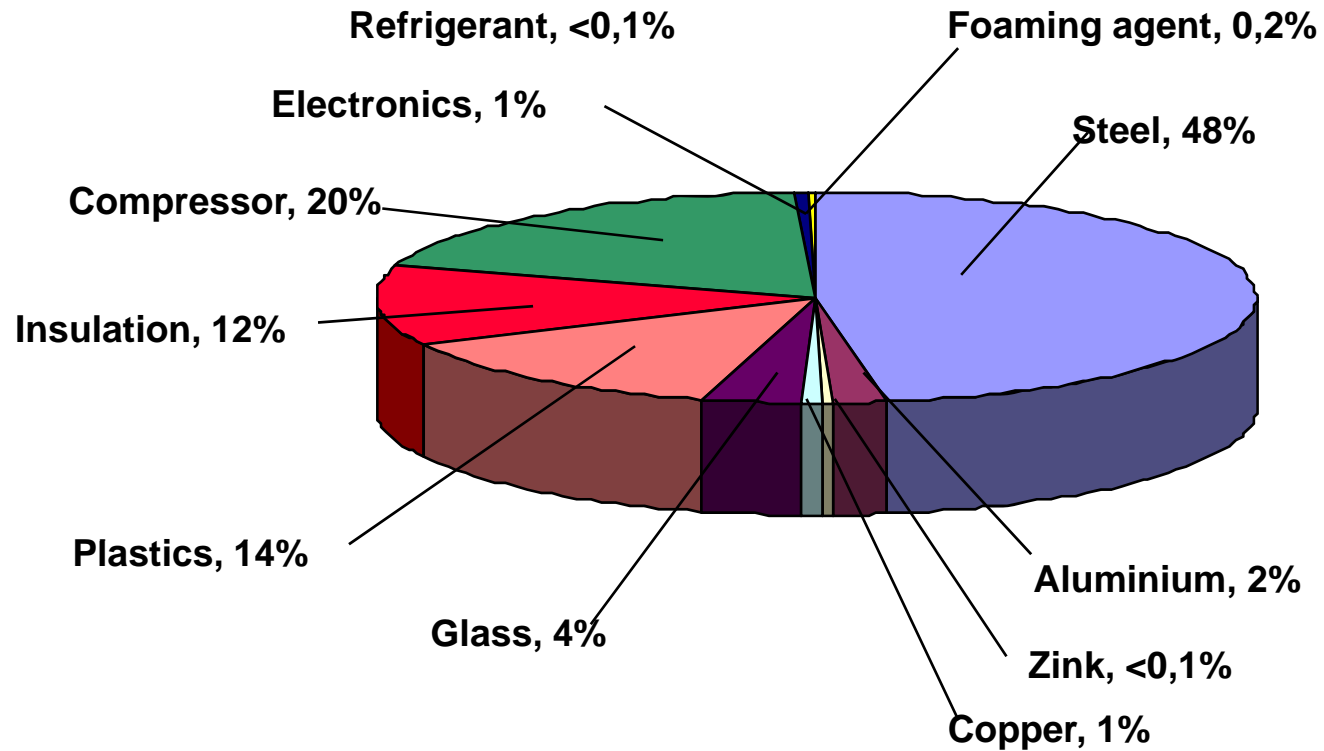
Internet home-page

Washing machines - energy class development

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Material Content of a Refrigerator



Study on recycling of refrigerator

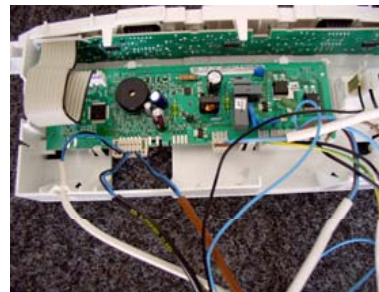
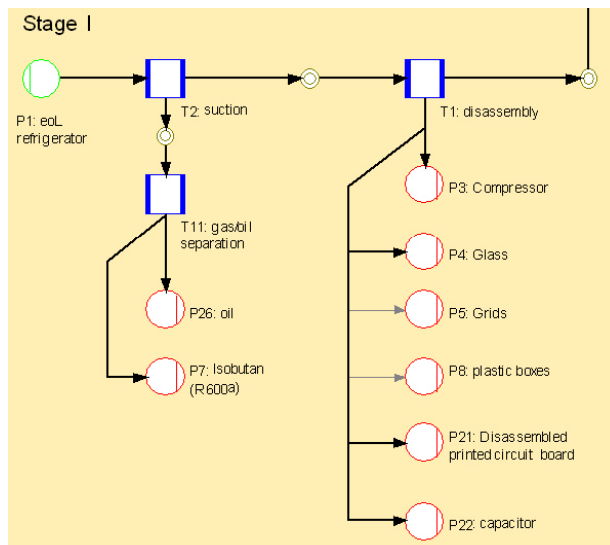
Example

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Disassembled at stage I:

- suction/release: oil & refrigerant
- compressor, 7682g
- glass shelves, 6981g
- printed circuit board, 103g
- (capacitor may remain within corpus)

•around 20% of the total weight of the appliance (74.3kg) are taken away in stage I



PVC free products

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- Introduced in Sweden in 1997 for professional customers
- Introduced in the general product range in 2001
- Available for refrigerators, washing machines, dishwashers, cookers



Vacuum Cleaner ZUSG3000

+33% efficiency
55% recycled
Super silent



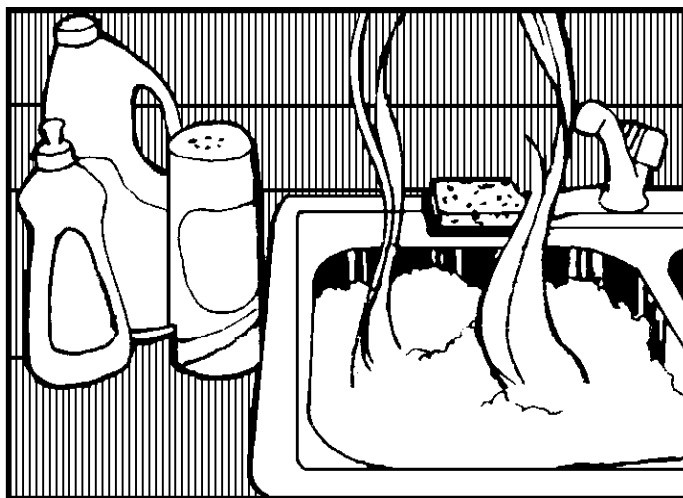
The background of the slide is a close-up photograph of water. It features numerous small, clear bubbles of varying sizes scattered across the surface. Concentric ripples are visible, suggesting recent disturbances in the water. The overall color palette is a range of blues, from light sky blue to deeper, muted tones.

Dishwashing vs Handwashing

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Dishwasher or hand-wash - saving potential in Germany

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On average use 103 litres of water
corresponding to 2,5 kWh (Bonn University)

Consumption: $240 * 2.5 = 600 \text{ kWh}$
 $240 * 103 = 24\,720 \text{ litres}$
Total cost: $600 * 0.186 + 24.7 * 4 = 210\text{€}$



A 12 set dishwasher corresponds to 240
washings annually.

Consumption: $240 * 1.05 = 252 \text{ kWh}$
 $240 * 16 = 3\,840 \text{ litres}$
Total cost : $252 * 0.186 + 3.8 * 4 = 62\text{€}$

Dishwasher annual savings:

- 148 €
- 350 kWh
- 150 kg of CO₂
- 21 m³ of water

Huge saving potential with DW use



UK (30% penetration rate) would save annually:

- 6 TWh electricity
- 365 million m³ water
- 2 million tonnes of CO₂ emissions

Complete home approach

Example: Water

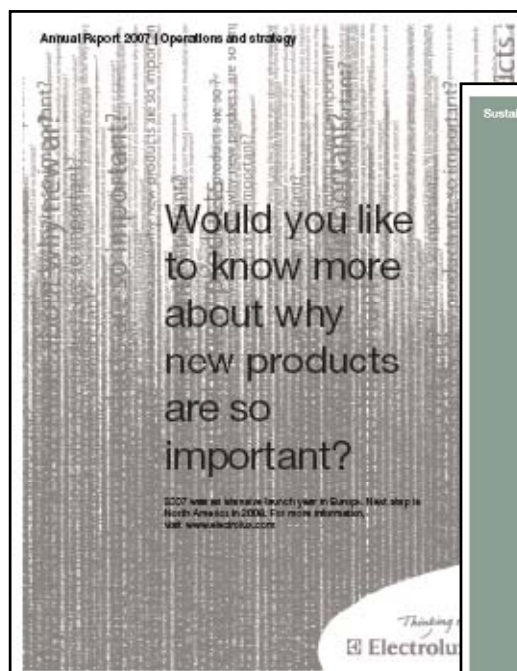
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- Reduced water consumption
- Reduced water waste
- Reduction in detergent usage
- Water heating management
- Flexible appliances adapting to your needs in Laundry/DW
- Improved drinking water (Source, 4springs)





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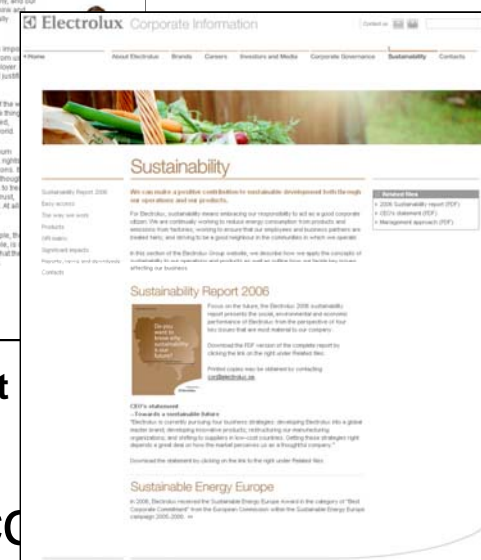
**Annual Report 2007
 Sustainability**



**Sustainability Report
 2007**



E-gate on Intranet



Internet home-page

www.electrolux.com

