AMBILAMP
Association for the Recycling of Light

• Lamps are the most used source of artificial light in the world, and therefore the volume of lamps thrown away is exceptionally high.

• Lamps represent **1.3% of the total weight** of electrical waste, but **80%** of this type of waste in **pieces**.

  • In 2012 AMBILAMP will collect **2.300 tonnes of lamps** in Spain.

  • Since 2005 AMBILAMP has collected **10.879 tonnes of lamps** for recycling, which represents more than **76 million lamps**.

**In 2013 AMBILAMP will reach more than 100 millions of lamps collected and recycled in Spain**
1. Legislation

2. Institutional

3. Operations
   3.1 Structure of the collection process
   3.2 Recycling
   3.3 Information and awareness raising

4. Financing

5. Key factors for success
GENERAL WASTE AND WEEE


Definition: a guideline drawn up by the OECD and later adopted and put into practice by the European Union. The purpose is to improve the total lifecycle of products by extending the responsibility of the producer/manufacturer to all the phases of the lifecycle thereof from their manufacture to their recovery, recycling and final disposal.

Governing principals:

- Prevention of contamination
- Product lifecycle
- The polluter pays

Ways of development:

- Collection & Recycling System Organization (CRSO)
- Individual collection system
WHAT IS A CRSO (COLLECTION AND RECYCLING SYSTEM ORGANIZATION)?

**CRSOs**: Non-profit organisations formed by producers with the objective of creating a structure that fulfils all the financial, operational, legal and informative requirements established in the Regulations.
EUROPEAN WASTE FRAMEWORK DIRECTIVE 2008/98
SPANISH WASTE ACT 22/2011

EUROPEAN WASTE FRAMEWORK DIRECTIVE 2008/98

EUROPEAN SECTORAL DIRECTIVES
**LEGISLATION**

**WASTE**

**SPANISH WASTE ACT 22/2011**

- Used oils (Royal Decree 679/2006) → SIGAUS
- Used tyres (Royal Decree 1619/2005) → SIGNUS
- Used batteries (Royal Decree 106/2008) → ECOPILAS ERP
- WEEE (Royal Decree 205/2005) → AMBILAMP, ECOLUM, ECOFIMÁTICA, TRAGAMÓVIL, ECOASIMELEC, ECOLEC, ERP
- Used packaging (Act 11/1997) → ECOEMBES
- Phytosanitary products (Royal Decree 1416/2001) → SIGFITO
- Used medicines (Act 11/1997 and Royal Decree 1345/2007) → SIGRE

**EUROPEAN WASTE FRAMEWORK DIRECTIVE 2008/98**

**EUROPEAN SECTORAL DIRECTIVES**
LEGISLATION

WASTE - WEEE

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EUROPEAN WASTE FRAMEWORK DIRECTIVE 2008/98

EUROPEAN SECTORAL DIRECTIVES
**Spanish WEEE Royal Decree 208/2005 of 25 February**

- A collection target of 4 kg/inhab. Per year is established

**New European WEEE Directive**

- 2012-2016 4 kg/inhab.
- 2016-2019 45% POM
- 2019 65% POM or 85% waste generated

**Financial guarantees with respect to future waste**

- Reinforce financial guarantees with respect to future waste

**Obligation of the distribution to accept the waste at 1x1**

- a. Obligation of the distribution 1x1
- b. Distributors provide for collection with sales areas relating to EEE at least 400m² of very small WEEE free of charge and with no obligation for 1x1
• Over the last 25 years lamp manufacturers have developed innovative processes aimed at increasing light source performance while at the same time reducing the amount of mercury required to make them work.

• The mercury content of lamps has been reduced by more than 90%.

• Entry into force of Directives such as RoHS regarding the prohibition of hazardous substances in EEE

**Reduction of the mercury content in fluorescent lamps over the last 28 years (best available technology)**
OPERATIONS – STRUCTURE OF THE COLLECTION PROCESS

LIGHT SOURCES

UNDER WEEE SCOPE
- FLUORESCENT
- SAVING LAMPS
- DISCHARGE
- LEDs RETROFIT

OUT OF THE WEEE SCOPE
- INCANDESCENT
- HALOGEN
1. Legislation

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5. Key factors for success
AMBILAMP is a non-profit Association of Producers / Importers of lamps with more than 90% of market share in Spain. AMBILAMP is a CRSO for light.

Created in 2005 by: PHILIPS, OSRAM, GE, SYLVANIA.

In Europe, there are 29 CRSOs, all the major countries have a CRSO specialised in light.
WHY A SPECIFIC CRSO FOR LAMPS?

- Negative value of the waste
- Hazardous waste
- Fragility
- Specific and complicated shape
- Specific treatment plants
- Specific collection system
- New LED technology mixed
1. Legislation

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The implementation of a multichannel collection process ensures proximity to the waste generation point that is more efficient and ecological.

Collection in small and large containers:
- LARGE: Cost efficiency wherever installation is possible
- SMALL: Brings the container closer to the citizen / domestic user

Development of special containers for specific types of lamps

Maximum reduction of lamp breakages

99% service coverage throughout the country

High degree of satisfaction among the collection points

Containers designed for logistical efficiency
LARGE CONTAINER

- Easy to assemble
- Can be used outdoors
- Foldable and stackable
- Light
- Long-lasting materials
- Traceability of the container
- Adapted to different types of lamps

WASTE TRACEABILITY SYSTEM IN LARGE CONTAINERS

RFID Chip

200 x 80 x 78
58 kg
OPERATIONS – STRUCTURE OF THE COLLECTION SYSTEM

SMALL CONTAINER

- Cheap
- Is a communication element
- Separation of fluorescent and saving lamps
- Anti-breakage ramp system
- Foldable and easy to assemble
OPERATIONS – STRUCTURE OF THE COLLECTION PROCESS

OTHER SPECIFIC CONTAINERS

Container for fluorescents > than 2 metres

Installers Container

Discharge Lamps (HID)
OPERATIONS – STRUCTURE OF THE COLLECTION PROCESS

COLLECTION CHANNELS ACCORDING TO CONTAINER TYPE

LARGE CONTAINER

- ELECTRICAL DISTRIBUTION
- LARGE INSTALLERS AND MAINTENANCE DIRECTORS
- OCCASIONAL/RELAMPINGS
- LARGE USER
- INDUSTRIAL
- DOMESTIC AND INDUSTRIAL

SMALL CONTAINER

- LARGE RETAIL OUTLET
- RECYCLING CENTRES
- DOMESTIC

DOMESTIC AND RELAMPINGS

SMALL RETAIL OUTLET THAT SELLS LAMPS

SMALL AND MEDIUM-SIZED INSTALLER
8,712 are necessary to cover 90% of national territory in 2009.
65% POM or 85% of the waste generated

4 Kg/Inhabitant/Year
40% of waste generated
ACHIEVED


1 366 1.169 1.460 1.709 1.903 2.169 2.300 2.469 2.763 2.936 3.044 3.540 3.749 3.970

0 500 1000 1500 2000 2500 3000 3500 4000 4500
1. Legislation

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5. Key factors for success
• The Hg and other heavy metals contained in WEEE lamps makes management by an authorised manager/recycler and the use of a responsible process necessary.

• Responsible process:

  - **Fluorescent Powder:** 3.5% of the weight of the waste
  - **Rare Earths:** 15 - 20% of the weight of the fluorescent powder
MATERIALS OBTAINED FROM THE RECYCLING PROCESS

- Mercury + Fluorescent Powder
- Glass
- Other Metals
- Plastic

New Lamps

Security warehouse
Glass and building – cement industry
Metal Foundries
Plastic Industry
1. Legislation

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5. Key factors for success
# Communication Plan

## First Information, then Motivation

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<th>2013</th>
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<tbody>
<tr>
<td>Producers</td>
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<td>Public Administrations</td>
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## First Professional, then Community

<table>
<thead>
<tr>
<th>Collection Channels</th>
<th>2007</th>
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<td>Small Installers</td>
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<td>Large Installers</td>
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<td>Large Users</td>
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<td>Wholesale Distributors</td>
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<td>Own Waste</td>
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<td>Municipal Recycling Centres</td>
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OPERATIONS – INFORMATION AND AWARENESS RAISING

EDUCATION EXPERIENCES

**Light Recycling Roadshow for professionals**
- 5 Months
- All around Spain

**Professional Education**
- 1.171 class
- 63.000 students

**Recycling School**
- 375.000 students
- 18.900 teachers
Cada vez somos más, únete.

No hay un buen motivo para reciclar. Hay muchos.
OPERATIONS – INFORMATION AND AWARENESS RAISING

MASS MEDIA CAMPAIGN

TV Spot
- FLUORESCENT LAMP
- SAVING LAMP

Outdoor

 билборд

Sí, se reciclan.
OPERATIONS – INFORMATION AND AWARENESS RAISING

GOOGLE MAPS, COLLECTION POINTS SEARCH

www.ambilamp.es
1. Legislation

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5. Key factors for success
FINANCING FRAMEWORK

FINANCIAL FRAMEWORK

Producer

Distribution

AMBILAMP

Consumer

Register of Producers

Collection and Recycling

(Spanish Ministry for Industry, Trade and Tourism)

Financial flow

Statements and information
FEE AMBILAMP

FEE CALCULATION PROCESS

FINANCING

Historical / Old Waste

Future Waste

6 years

COST OF THE HISTORICAL / OLD WASTE

COST OF THE FUTURE WASTE
1. Legislation

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### Key Factors for Success

1. **Vision**
2. How the stakeholders perceive the service
3. Internal control of the organisation
4. Fighting Free Riders in collaboration with the government
5. Sufficient amounts invested in communication
6. Implication of Administration, distribution and social agents
7. Visibility of the Fee
8. **ADEQUATE, REASONABLE AND AGREED LEGISLATION**
KEY FACTORS FOR SUCCESS

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AMBILAMP carries out surveys to measure the degree of satisfaction among the different stakeholders.

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<td>2008:</td>
<td>7.40</td>
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<tr>
<td>2009:</td>
<td>7.95</td>
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<td>2010:</td>
<td>8.08</td>
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<td>8.12</td>
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<th>Participant Producers</th>
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<td>2008:</td>
<td>7.60</td>
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Organisation Maturity model

2009 3.71

2010 4.04
## Key Factors for Success

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Many thanks for your attention!!