

Deontology & Professionalism

Deliverable 4

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1- Points to add to the ethical code of a medium or small sized company that makes reference to the correct elimination of e-waste.

2- UNE-ISO standards and most relevant laws on waste electrical and electromagnetic devices.

1- Our Ethical Code on e-waste.

We've regarded this activity as extremely insightful not only because of the inherent value the development of the exercise, but because we believe this might be applicable in our personal lives in a coming future, when we work for a certain company, or even start one ourselves.

1.1- The Code

We hope this reflects our commitment to sustainable electronics development and a growing environmental conscience and awareness, which, we believe, will most certainly lead to a more educated and better world in our generation and the coming ones. Thus we commit to:

- Try to find alternative uses for functional pieces of equipment that may be obsolete.
- Put them for sale so a person able to find these alternative uses can profit from the product if we ourselves can't.
- Consider equipment or economic donations to NGOs and other entities for social change that forward the interests of sound environmental policies, especially when it comes to dealing with e-waste.
- Give that medium-sized companies in Spain are considered to be between 51 and 200 employees, to consider the appointment of an environmental policy advisor to the company's board.
 - This advisor must set goals and ensure compliance with sustainable e-waste treatment.
 - And, obviously, compliance with legal standards.
- To prevent, in all cases, actions performed by the company that damage the environment in an obvious manner. It doesn't make sense to worry about e-waste if we perform harmful actions to the environment in other areas of the company.

1.2.- Examples of Ethical Codes related to E-waste.

ACM code:

“1.1 Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.

This principle, which concerns the quality of life of all people, affirms an obligation of computing professionals, both individually and collectively, to use their skills for the benefit of society, its members, and **the environment surrounding them**. This obligation includes promoting fundamental human rights and protecting each individual's right to autonomy. An essential aim of computing professionals is to

minimize negative consequences of computing, including threats to health, safety, personal security, and privacy.

[...]

In addition to a safe social environment, human well-being requires a safe **natural environment**. Therefore, computing professionals **should promote environmental sustainability both locally and globally**.”

“1.2 Avoid harm.

In this document, "harm" means negative consequences, especially when those consequences are significant and unjust. Examples of harm include unjustified physical or mental injury, unjustified destruction or disclosure of information, and unjustified damage to property, reputation, **and the environment**. This list is not exhaustive.”

<https://www.acm.org/code-of-ethics>

IEEE code of ethics:x

“to hold paramount the safety, health, and welfare of the public, to strive to **comply with ethical design and sustainable development practices**, and to **disclose promptly factors that might endanger the public or the environment**,”

<https://www.ieee.org/about/corporate/governance/p7-8.html>

2- Most relevant legislation on waste of electrical and electromagnetic devices and UNE-ISO standards.

2.1.1- Relevant Laws: Royal Decrees

- **Royal Decree 110/2015**

- https://www.boe.es/diario_boe/txt.php?id=BOE-A-2015-1762

The purpose of this legislation is to address the problem of electric and electronic waste. In order to do this, it specifically points out two initiatives: avoidance of residue generation and reusability of devices.

The Royal Decree places special emphasis in the role of the producer when it comes to residue generation. By placing the burden on the producer, the aim is to promote a reduction in residue generation by means of improved processes, reduced usage of toxic materials or better residue management.

Organizations must:

1. Register themselves at the “*Registro Integrado Industrial*” as producers of electric and electronic waste.
2. Comply with the responsibility placed upon them by the legislation regarding management and disposal of e-waste.
3. Finance the cost of disposing of the devices they sell.

- **Royal Decree 187/2011, of 18th Feb. related to the establishment of ecological design requirements applicable to energy consumer products.**

- <https://www.boe.es/buscar/doc.php?id=BOE-A-2011-4038>

The purpose of this royal decree is to establish the ecological design requirements applicable to energy-related products, in order to contribute to sustainable development and environmental protection, through the increase of energy efficiency, decrease in pollution and increase the security of energy supply. The provisions of this Royal Decree shall apply to energy-related products for which execution measures are applicable in order to be introduced into the market or placed in service. It shall not apply to means of transport of persons or goods and shall be without prejudice to the applicable Community legislation on the management of waste and chemical products, including Community legislation on fluorinated greenhouse gases.

This standard does not only apply to products that once entered the market or put into service use energy, but to all those that were related to energy or environmental aspects thereof and that in one way or another could contribute during its use to an important energetic saving, to the sustainable development, to the increase of the energetic efficiency and to the security of energetic supply.

The following definitions stand out in article 2: Product related to energy; Execution measures, which are those adopted by the Commission to establish the ecological design requirements in accordance with Annexes I and II of this standard; Ecological profile and environmental behavior of a product.

2.1.2- Relevant Legislation: Laws

- **Law 22/2011 on residuals and contaminated ground.**
 - <https://www.boe.es/buscar/act.php?id=BOE-A-2011-13046>

This new Directive establishes the legal framework of the European Union for the management of waste, provides the tools to dissociate the relationship between economic growth and waste production, with special emphasis on prevention, understood as the set of measures adopted before that a product becomes waste, to reduce both the amount and content of hazardous substances and the adverse impacts on human health and the environment of the waste generated. This incorporates the principle of hierarchy in the production and management of waste that has to focus on prevention, preparation for reuse, recycling or other forms of recovery, including energy recovery and aims to transform the European Union into a society of recycling and contribute to the fight against climate change.

2.1.2- Relevant Legislation: Directives

- **Directive 2012/19/UE of the European Parliament and Council of 4th July 2012 on residuals of electric and electronic equipment (RAEE)**
 - <https://www.boe.es/buscar/doc.php?id=DOUE-L-2012-81320>

This Directive establishes measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste electrical and electronic equipment (WEEE), and by reducing the overall impacts the use of resources and the improvement of the effectiveness of said use, in accordance with Articles 1 and 4 of Directive 2008/98 / EC, thus contributing to sustainable development.

2.2- UNE-ISO standards relevant to the topic

ISO 14001 Highlights

- **On Organizational Context**

The organization must determine which may be the issues that arise as a consequence of its activity, as well as outlining the environmental aspects that may impact the way its economic activity is carried out. Once the context is thoroughly studied and the relevant issues are identified, the organization must implement an environmental management system that guarantees the correct execution of the economic activities in compliance with the environmental legislation.

- **On Leadership**

The executive body of the organization must take accountability of the effectiveness of the aforementioned environmental management system. They are responsible for its continuous improvement and integration with the rest of economic activities of the organization.

To this end, they must also develop an environmental policy that allows establishing new objectives to protect the environment and comply with local legislation. This policy must be available to interested parties and distributed among the company's employees.

- **On Support**

It is a responsibility of the organization to maintain and improve the environmental management system, such as by providing qualified employees and necessary resources to the cause. It is also important to spread awareness of the environmental policy through internal communication channels, reminding employees of the impact of their actions, whether positive or negative. This communication must also happen externally, directed to the relevant parties.

- **On Operations**

The organization must deal with planned and unplanned changes, mitigating setbacks when necessary. It must also control processes contracted to external agents, with the help of a clearly defined set of procedures for such cases, and act in accordance to the level of control they hold.

In case of emergencies, the organization must be prepared to deal with any environmental problem, mitigating its impact as much as possible. Preferably, the organization will put in place preventive

measures that will avoid such emergencies, such as periodic inspections, drills and providing training to deal with these situations.

- **On the Evaluation of Performance**

The organization must collect as much feedback as possible about their environmental performance. It must first determine which processes must be monitored, how they will be monitored and set the standards that must be reached. Finally, the observations must be compared to the objectives and implement the necessary changes if they are not met.

The executive body must be directly involved with the feedback process and adjust the direction of the organization as needed.

- **On Improvement**

After the feedback analysis, the organization must seek to improve the areas where the environmental performance is suboptimal. Moreover, the standards to be met must be in constant revision, with the objective of perpetual improvement and reduction of the environmental footprint.

UNE-EN 50625-1:2014

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0054127>

This European standard is applicable to the treatment of waste electrical and electronic equipment (WEEE). This standard will be completed, for example, with standards covering specific devices.

This standard applies to the treatment of WEEE until it reaches the end of the residue condition or, until the WEEE is prepared for reuse, recycling, recovery or disposal.

This standard is addressed to all operators involved in the treatment, including the corresponding to handling, classification and storage of WEEE.

UNE-CLC/TR 50625-6:2018 IN

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0060740>

This technical report provides information on the alignment between Directive 2012/19 / EU and the series of Standards EN 50625 and Standard EN 50614..

UNE-CLC/TS 50625-3-5:2017 (Ratified)

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0059306>

Technical specification for de-pollution - Photovoltaic panels (Endorsed by Asociación Española de Normalización in December of 2017).

UNE-EN 50625-2-4:2017 (Ratified)

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0059305>

Treatment requirements for photovoltaic panels (Endorsed by Asociación Española de Normalización in December of 2017).

UNE-EN 50625-2-3:2017 (Ratified)

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0058974>

Treatment requirements for temperature exchange equipment and other WEEE containing VFC and/or VHC (Endorsed by Asociación Española de Normalización in November of 2017).

UNE-CLC/TS 50625-5:2017 (Ratified)

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0058977>

Specification for the final treatment of WEEE fractions - Copper and precious metals (Endorsed by Asociación Española de Normalización in November of 2017).

UNE-CLC/TS 50625-3-4:2017 (Ratified)

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0058975>

Specification for de-pollution - temperature exchange equipment (Endorsed by Asociación Española de Normalización in November of 2017).

UNE-CLC/TS 50625-3-3:2017 (Ratified)

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0058976>

Specification for de-pollution - WEEE containing CRTs and flat panel displays (Endorsed by Asociación Española de Normalización in November of 2017).

UNE-EN 50625-2-2:2015

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0055798>

This European standard is applicable to the treatment of WEEE containing CRTs and flat screens. This standard applies to the treatment of WEEE containing CRTs and flat screens until they reach the end of the waste condition, or until the fractions are recycled, recovered or eliminated.

This European standard is addressed to all operators involved in the treatment, including handling, classification and storage.

UNE-EN 50625-2-1:2015

<https://www.aenor.com/normas-y-libros/buscador-de-normas/UNE?c=N0055159>

This European standard is applicable to the treatment of lamps.

This European standard applies to the treatment of lamps until they reach the end of the residue condition, or until the fractions of lamps are recycled, valued or eliminated.

This European standard is addressed to all operators involved in the treatment, including what corresponds to the handling, classification and storage of lamps. This European standard applies to all installations, including those whose treatment operations use mobile equipment.