



LAYMAN'S REPORT

WEEELABEX

LIFE07 ENV/B/000041

Harmonisation of a common set of European standards for the treatment and recycling of electronic and electrical waste and for the monitoring of the processing companies (WEEELABEX)



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Context

In 2010, in the 27 member states of the European Union plus Norway and Switzerland, 11.5 million tons of electrical and electronic equipment were placed on the market. The quantity of WEEE (waste electrical and electronic equipment) 'arising' in that same year is estimated to be approximately 7.9 million tons. Less than half of that quantity, 3.1 million tons, is officially collected, treated and reported to the authorities.

WEEE contains precious metals, such as gold and silver, as well as other metals, such as copper and aluminium. For centuries, the costs associated with recycling have been recovered through the sale of those materials extracted from end-of-life products. The trouble is that these materials are also often found next to critical raw materials, such as palladium and neodymium, which Europe's economy requires for the production of electronics, as well as hazardous substances, for example mercury, brominated flame retardants, polychlorinated biphenyls, cadmium and volatile fluorocarbons. The latter materials require specialist handling and treatment in order to avoid environmental pollution and exposure to health and safety risks. WEEE containing those substances are often not properly de-polluted in Europe or shipped to poor countries under the guise of 'export for re-use'.

Clearly, standards are required to regulate collection, sorting, handling, storage, transportation, treatment and disposal of WEEE, rules must be laid down to decide whether an undertaking's processes deserve to be identified as 'excellent', and auditors must be trained to verify whether undertakings involved in collection and treatment meet those standards. The WEEELABEX project's stated ambition was to protect the environment by improving WEEE collection and recycling practices in Europe.

Origins of a project

Austria, Belgium, the Netherlands, Norway, Sweden and Switzerland were among the first nations in Europe to develop producer responsibility legislation addressing



the growing mountain of electrical and electronic waste. Producers established compliance schemes, i.e. organisations that manage collection and recycling of WEEE on their behalf by contracting logistics companies and recyclers. The number of WEEE compliance schemes in Europe today is estimated at 140; 39 of them are members of the WEEE Forum, collectively reporting collection of about 2 million tonnes of WEEE.

As they were being set up, each of the 39 compliance schemes in the WEEE Forum developed different requirements in its own standards in contracts with suppliers. Each of them required their business partners to meet certain pre-determined technical specifications and levels of compliance, both based on their interpretation of legal requirements, within economic constraints. Collectors and recyclers in Europe ended up applying different requirements from a range of compliance schemes resulting in different levels of quality and distorted competition.

In 2007, the compliance schemes in the WEEE Forum came up with the proposition to harmonise contractual requirements for all WEEE categories laid down in EU legislation. A project plan was developed and submitted with the European Commission under the LIFE programme. The plan was approved in 2008 and the project took a swift start on 1 January 2009. Various panels and working groups were created, and stakeholders from the producers' and recyclers' community as well as other compliance schemes not belonging to the WEEE Forum were involved in the activities.



The project's ambition

The chief aspiration of the WEEELABEX project was to protect the environment through the development of, on the one hand, European standards with respect to the collection, sorting, handling, storage, transportation, treatment and disposal of all kinds of electrical and electronic waste, and, on the other hand, rules to decide whether an undertaking's processes deserve to be WEEELABEX approved (Conformity Verification) and trained auditors conducting audits using the same documents.

Both the standards and the rules regulating how the implementation of the standards should be monitored will affect all undertakings with which the twenty-six producer compliance schemes of the newly created WEEELABEX organisation have a contractual relationship, representing today about two-thirds of all officially reported WEEE collection in Europe

This project has met its objectives. The WEEE bar has been raised – collection and recycling quality has improved – and the playing field is more level than before. Undertakings will implement higher standards, thereby reducing damage to the environment and improving working conditions. Dishonest companies or individuals involved in illegal activities will less likely be able to dodge 'the system'. A rising tide raises all boats.

WEEELABEX breaks new grounds

The project has successfully produced ten deliverables.

- The creation in Prague of a new institution, the WEEELABEX organisation, consisting of a General Assembly of twenty-six producer compliance schemes, a Governing Council and the WEEELABEX Office, the organisation's secretariat/notary.
- Harmonised, verifiable and normative standards with respect to the collection, sorting, handling, storage, transportation and disposal of all kinds of WEEE. All producer



General Assembly of the WEEELABEX organisation

compliance schemes in the WEEELABEX organisation will require from their clients that they meet the quality standards. The standards are available in English, French, German, Italian, Polish, Portuguese and Spanish.

- A ‘watchlist’ of elements that future revisions of the standards need to take into account.
- The WEEELABEX Office is training auditors that are familiar with WEEE processing technologies and have auditing skills, in order to allow them to conduct audits in accordance with the standards. They will constitute a ‘pool of WEEELABEX auditors’. In addition, the office will monitor the implementation of the standards, provide guidance to operators on how to perform internal conformity assessment, contribute to a definition of (emission or concentration) limit values and select WEEELABEX auditors on the basis of defined eligibility criteria.
- Trained WEEELABEX auditors have a toolbox at their disposal consisting of manuals, checklists and audit forms.
- Undertakings adhering to WEEELABEX will periodically monitor downstream operations, using uniform reporting and documentation forms.
- An undertaking whose operations have successfully undergone WEEELABEX Conformity Verification (CV) will be listed on a public website and identified by the WEEELABEX mark. Members of the WEEELABEX organisation must recognise successful CV commissioned by other compliance schemes (mutual recognition). Sanction, appeal and cancellation procedures have been put in place.
- The WEEE Forum provides for a Technical Committee, a platform in which recyclers, producer stakeholders and WEEE compliance schemes can collaborate constructively.
- Several high-level technical studies were conducted, giving rise to a better understanding of problems to be addressed and to informed decisions on limit values.
- As a result of dozens of meetings, one hundred experts, from different strands of activity, have become familiar with WEEELABEX and state of the art operations.



TV shadow masks



Training of pilot auditors

A rising tide raises all boats

WEEELABEX has long term environmental, economic and social benefits, directly affects the WEEE market, levels the playing field, inspires other nations in the world to do similar projects and confirms standardisation as a relevant policy instrument.

Long-term environmental benefits

- The project has made the WEEE community more conscious of the importance of proper de-pollution, quality and environmental protection, as opposed to a narrow focus on cost reduction and competitiveness.
- Not all markets in Europe are equally mature. In those markets where WEEE operations are insufficiently developed, there is a distinct need, among compliance schemes, the producers' community and recyclers, for quality standards, globally considered 'state of the art'.
- In those less mature WEEE markets, there is also a distinct need to have the operations controlled and audited by trained and qualified auditors who conduct audits in accordance with quality standards.
- The harmonised rules of Conformity Verification will attract auditors from existing certification outfits to register as 'WEEELABEX auditors', and therefore improve quality in auditing across the board (not just with respect to the members of the WEEELABEX organisation).
- Enforcement will improve. Authorities across Europe have acknowledged the standards as a benchmark for the sector.
- WEEELABEX was the context within which several technical studies were conducted. These reports have given rise to a better understanding of problems to be addressed and to informed decisions on limit values.



Energy-saving lamps

Direct and immediate impact on the WEEE market

- The uniform set of standards will have a definitive, direct and immediate impact on hundreds of undertakings across Europe involved in WEEE operations and covering all types of WEEE. They will be implemented by producer compliance schemes that represent today two-thirds of all officially reported WEEE collection in Europe.
- The fact that the WEEELABEX Office is headquartered in Prague will have a beneficial impact on the quality of operations in Central and Eastern Europe.

Long-term social benefits

- The number of WEEE treatment plants that choose to innovate and meet the standards is increasing, which is beneficial for workers' health and safety.
- WEEELABEX has raised awareness among the population of the critical need to protect the environment. This general consciousness will make investments more acceptable. Citizens will no longer tolerate that WEEE containing hazardous substances is landfilled. They will insist that more critical raw materials are recovered.



Safeguarding workers' safety

A levelled playing field in Europe

- The WEEELABEX standards create an equal playing field among all WEEE systems of the WEEE Forum, plus the European Recycling Platform (ERP), which operates in thirteen jurisdictions in Europe. Once these proprietary standards will have been translated into official EN standards, to which reference is made in Directive 2012/19/EU on WEEE, they will further level the playing field among all undertakings on the market, including the ones with which WEEE systems of the WEEELABEX organisation have no contractual relationship.

Resonance across the globe

- As a result of the WEEE Forum’s dissemination activities, stakeholders in other parts of the world have indicated that the WEEELABEX standards are a source of inspiration. Undertakings outside Europe are benchmarking their activities to the standards.
- WEEELABEX requires that downstream operations are monitored and reported. The reporting will follow common templates and principles that allow recyclers to calculate and communicate recycling and recovery quotas to WEEE systems.
- The WEEE Forum has received expressions of interest of other organisations outside Europe who are seeking mutual recognition of WEEE auditors training programmes.
- The Standards Qualification Panel of EPEAT, a US-based comprehensive environmental rating that helps identify greener computers and other electronic equipment and that is used by hundreds of companies, universities and government agencies across the world, has qualified the WEEELABEX standards for use to meet the requirements of end-of-life criteria of the applicable IEEE standards.



Standardisation approach replicable in other policy fields

Long-term economic benefits

- The fact that WEEELABEX systems have to recognise the outcome of WEEELABEX Conformity Verification audits, even if commissioned by competing WEEELABEX systems, will have a downward pressure on the organisations’ cost structure and therefore make compliance schemes more competitive, without a detrimental effect on the quality of control. There will be no need to commission similar audits of the same processes.
- Recyclers across Europe face one set of standards rather than a huge array of requirements. This improves their competitiveness.
- The WEEELABEX organisation might in the foreseeable future become a global centre of excellence for WEEE audit training programmes.

- The WEEELABEX organisation is based on open market principles. Any auditor, regardless of which organisation’s payroll he/she is on, can become a WEEELABEX auditor, provided he/she is eligible and successfully concludes the training programme. There is a distinct interest among auditors working for existing certification outfits to follow the training programmes.
- Recyclers that implement new technologies based on the most recent specifications arising from the standards, e.g. related to limit values, will contract with WEEELABEX systems and gain market share.



Standardisation as a policy instrument

- The proprietary set of standards forms the basis of official EN standards, mandated by the European Commission under Directive 2012/19/EU. It is expected that standardisation will be considered an important EU policy instrument, also in the context of the revision by the European Commission of the effectiveness of policy instruments in the context of Extended Producer Responsibility (EPR).
- The Better Regulation programme of the European Union generally prefers the standards approach to legislation, because it allows for flexibility in regulation. Amending a standard is less cumbersome than amending a law.

The project is replicable and transferable

The WEEELABEX approach essentially boils down to producer responsibility organisations implementing standards on a voluntary basis. This approach is demonstrably replicable and transferable.

Replicability in other pieces of EPR-based legislation

- The Commission is currently reviewing the implementation of the principle of EPR as an effective policy instrument in waste legislation. The WEEELABEX approach whereby producer responsibility organisations implement standards on a voluntary basis will likely be implemented in other laws based on EPR. Especially the idea that such an endeavour is undertaken in coalition with recyclers and producers is demonstrably inspiring policy-makers.

Interest among member states

- Member states have expressed interest in the standards. It is in their self-interest to see actors on the WEEE market choose to regulate themselves, because it helps them spot the unscrupulous actors and enforce legislation effectively by means of a risk-based approach.
- Some member states have made it known that they will require recyclers to meet the WEEELABEX standards as part of transposition of Directive 2012/19/EU into national law.



Member states express interest

Even though member states cannot legally impose WEEELABEX Conformity Verification on the market, many of them tacitly admit that there is value in becoming involved in the process.

Transferability to other fields of market regulation

- The principle that standardisation is a lynchpin of policy-making can be transferred to fields other than environmental protection, for example health or mobility.

Co-operation

- The project has demonstrated that co-operation works. Co-operation among different stakeholders is not a mere option but a must. Especially in the complex world of WEEE management and policy, only sustained co-operation can be successful.

Which way do we go from here

WEEELABEX ensures that WEEE containing hazardous substances is properly de-polluted. However, only a tiny fraction of the critical raw materials, such as palladium and neodymium, which Europe's economy requires for the production of new technologies and applications, is recovered. Another problem remains the illegal shipments of WEEE containing hazardous substances to poor countries under the guise of 'export for re-use'. These two problems are being addressed through new projects.

- The WEEE Forum is involved in a two-year international project 'Countering WEEE Illegal Trading' (CWIT), fully financed by the European Union. The purpose of CWIT is to map the WEEE flows, estimate the quantities of WEEE illegally traded and identify the organisations engaged in criminal behaviour.
- The WEEE Forum is a member of the European Innovation Partnership (EIP) on Raw Materials, presided over by Antonio Tajani, Vice President of the European Commission. In the EIP's High Level Steering Group, the Sherpa Group and the Operational Groups, the WEEE Forum is actively contributing to the drafting of the Strategic Implementation Plan.
- In the fringe of the EIP, the WEEE Forum will launch new projects, for example proposing new business models that secure higher collection rates of WEEE containing critical raw materials.
- This year, the WEEE Forum will lodge a project proposal for LIFE co-financing aimed at designing instruments to map the 'urban mine' of critical raw materials embedded in WEEE.



Mattia Pellegrini, Head of Unit (Metals, Minerals, Raw Materials) in the European Commission



The WEEE Forum is a European non-profit association speaking for 39 electrical and electronic equipment waste (WEEE) producer compliance schemes. It was set up in the early 2000s. The 39 members are based in Austria, Belgium, Czech Republic, Denmark, Estonia, Italy, Germany, Greece, France, Ireland, Lithuania, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. It is the biggest organisation of its kind in the world. In 2012, its member organisations reported collection and proper de-pollution and recycling of about 1.9 million tonnes of WEEE. Members in 2013: Amb3E, Appliances Recycling, Asekol, Asekol SK, EĀF, EcoAsimelec, Ecodom, Ecolec, Ecologic, Ecoped, ecoR'it, Eco-systèmes, Ecotic, Eco Tic, EEPa, EES-Ringlus, ElektroEko, Elektrowin, El-Kretsen, elretur, el retur, Envidom, Fotokiklosi, Lightcycle, Lumicom, RAecycle, Recicla Canaria, Recupel, ReMedia, Repic, Retela, RoRec, SENS e-Recycling, SLRS, SWICO, UFH, Wecycle, WEEE Ireland and Zeos.

The twenty-six producer compliance schemes that became members of the WEEELABEX organisation are: Amb3E, Asekol, Budget Pack Environmental, EĀF, Ecodom, Ecolec, EcoLogic, Eco-systèmes, Eco Tic, Elektrowin, El-Kretsen, elretur, el retur, European Recycling Platform, Recupel, ReMedia, Repic, Retela, RoRec, SENS e-Recycling, SLRS, SWICO, UFH, Wecycle, WEEE Ireland and Zeos. See www.weeelabex.org.

For more information, please contact: Pascal Leroy, Secretary General of the WEEE Forum and WEEELABEX project manager – pascal.leroy@weee-forum.org. See also www.weee-forum.org.