

APPLiA's Assessment of a Workable and Effective WEEE Legislation

The current EU WEEE Directive is no longer fit for purpose. Electronic waste is the fastest-growing waste stream in Europe, yet, based on the current calculation methodology almost 50% of the WEEE in the EU never reaches a legitimate treatment operator. It is diverted through unmonitored collection points, opportunistic theft, brokers and dealers operating in the shadows, and illegal exports leaving Europe under the disguise of "re-use".

The root cause structurally lies on the value of WEEE once discarded, and value attracts leakage at every weak point in the chain. The actors who physically control WEEE operate, today, with no shared visibility, no common obligations, and no reliable way to verify where the material actually goes; while Member States face no structured accountability for enforcement failures. The result is that everyone who plays by the rules loses: producers who finance a system they cannot see, compliant recyclers who watch material that should reach their certified plants disappear into substandard or illegal channels, and producer responsibility organisations (PROs) expected to deliver outcomes they have no tool to enforce.

The reform now opening under the Circular Economy Act is the opportunity to build a system in which every tonne of WEEE flows to a legitimate destination, is treated to a high standard, and can be traced from the household to the recovery of secondary raw materials. The reform should prioritise harmonisation and consistent application across the Single Market while preserving national best practices. Based on this, APPLiA, representing the home appliance sector, has made an assessment on how EU WEEE legislation can be made more workable and effective in the future.

The key principle behind our assessment

"All actors": Everyone who has access to or handles WEEE has obligations. Today, accountability stops at the producer, while the material passes through retailers, logistics operators, municipalities, collection points, brokers and treatment operators who carry no duty specific to their role. A system in which only one party of the whole value chain is accountable cannot deliver properly.

"The right actor": Each obligation should be placed on the actor best positioned to fulfil it, at the point in the chain where it has actual control over the material. This does not redistribute the financial responsibility of EPR: producers and their PROs will continue to finance the system. What is needed is an operational architecture that makes that financial investment traceable and effective.



Eight priorities for future WEEE legislation:

1. Clear roles and obligations for every actor in the chain
 2. Full traceability from collection to secondary raw material
 3. Collection and recovery targets that reflect reality
 4. Mandatory high-quality treatment on the right legal basis
 5. A level playing field for online sales
 6. Sound governance of producer responsibility
 7. One registration, one reporting format across the Single Market
 8. Enforcement and structured Member State accountability
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Priority 1 — Clear roles and obligations for every actor in the chain

Implements Waste Framework Directive Article 8a(1)(a), by defining the different actors' roles and duties uniformly across the EU.

Why obligations on WEEE value chain actors are the precondition for the whole system

Today, PROs are charged with organising collection, securing the material, and delivering it to certified treatment. But they can only do this if the actors who actually hold the material at each stage play their role. Today those actors carry no legal obligation specific to their role. If a retailer does not perform mandatory take-back, a PRO cannot compel it. If a logistics operator diverts WEEE after take-back, a PRO cannot stop it. If a municipality sells metal-rich WEEE to a scrap dealer who pays more, neither a PRO nor a producer can prevent it. Without binding rules for all actors, the entire compliance chain collapses at the first handover.

The revised legislation should therefore define every actor involved in handling WEEE, using definitions harmonised with the Waste Framework Directive, and the Battery Regulation and the EN treatment standards, and assign each a clear, role-specific legal obligation enforceable by the competent authority. A clear legal duty transforms cooperation from an optional negotiation into an enforceable framework.



This gives producer responsibility organisations the tool they need to sit down with every actor in the chain and organise collection effectively, knowing that each one has a baseline duty to participate, to route the material to a certified operator, and to report the handover. **Rather than leaving the system vulnerable to *ad hoc* negotiations that any party can abandon, a clear legal obligation transforms cooperation from an optional negotiation into an enforceable compliance framework,** ensuring every stakeholder is legally bound to their specific role in the value chain.

ROLE OF EACH ACTOR

End-users:

- should carry a legal obligation to discard WEEE separately from other waste, including mixed municipal waste, and to hand it over only to collectors or authorised receiving operators.

Retailers and distributors:

- Take back WEEE free-of-charge on a one-to-one basis when supplying equivalent new equipment, and accept WEEE in the same category with no purchase required (1:0).
- The 400 m² sales-area exemption should be removed entirely: every retailer and distributor takes back the product category it sells, regardless of the size of its sales area. Provide clear, visible information at the point of sale and online on how and where to return WEEE.
- Small WEEE has the highest leakage rate precisely because end-users have no convenient return channel. Where a retailer or distance seller delivers new equipment to a household, the delivery operator must collect — at the same time, free-of-charge — any small WEEE the household wishes to hand over, regardless of type or brand. The collected material is deposited in a container provided by a PRO or by an authorized operator at the consolidation warehouse. This leverages last-mile delivery infrastructure that already exists, and Italy has implemented the model nationally.

The visible fee should remain available as a voluntary option. Where producers or collective schemes choose to show the WEEE management cost, distributors and retailers should be required to display it separately to the end-user, identical to the amount identified by the producer, strengthening consumer awareness of responsible WEEE management.

Online marketplaces and distance sellers - a level playing field with physical retail:

- Where they sell electrical and electronic equipment, they carry take-back obligations



equivalent to a physical shop. In practice this means having arrangements in place with retailers and logistics operators on the ground, so that a consumer who buys online has a real, convenient way to return old equipment — the platform cannot offload that responsibility simply because it has no shopfront.

- They verify, and display, the producer registration number of the sellers using the platform (see Priority 4).

Logistics operators:

- For the first time, logistics operators performing take-back, transport, consolidation or warehousing of WEEE carry explicit handling and routing obligations: no mixing with other waste, condition preserved, material routed only to authorised operators. They register in the national register and submit handover notifications. Leveraging their delivery infrastructure for reverse collection.

Municipalities and collection point operators — accountable handover:

- Provide free, effective access to public collection points; register the collection point in the national register; keep WEEE separated and protected from scavenging and theft; and route it only to authorised receiving operators, reporting the handovers. This addresses the most acute leakage and theft risk, the unsupervised transfer station or open container from which material vanishes overnight.

Treatment operators and recyclers:

- Authorisation to receive WEEE is conditional on meeting the CENELEC EN 50625 treatment standard, or an equivalent recognised under national law — so that meeting the standard becomes the condition to receive WEEE and operate in the market.

What “all actors” means

Actor	Operational obligation	Data they generate
Producers / PROs	<i>Finance the system, organise collection and treatment. Financial EPR responsibility unchanged.</i>	<i>Placed-on-market data; quantities allocated to treatment; output reporting.</i>
Retailers & distributors	<i>Take-back (1:1 and 1:0), no size threshold.</i>	<i>Quantities handed over; authorised destination chosen.</i>
Distance sellers & marketplaces	<i>Take-back options equivalent to physical retail, via ground arrangements; verify and display seller registration.</i>	<i>WEEE collected under take-back; seller registration status.</i>



Logistics operators	<i>Handle/transport WEEE without mixing or damage; reverse-logistics collection on delivery.</i>	<i>Digital Reporting for the handovers.</i>
Municipal collection points	<i>Accept all WEEE; route only to authorised operators.</i>	<i>Quantities received; authorised destinations.</i>
Treatment operators / recyclers	<i>Treat to CENELEC EN 50625; authorisation conditional on compliance.</i>	<i>Full output-stream reporting down the chain to secondary raw material.</i>

The 'all actors' approach does not redistribute financial EPR responsibility. It closes the operational and data gaps that today make it impossible for producers and PROs to verify whether their contributions are achieving the environmental outcomes they pay for.

Priority 2 — Full traceability from collection to secondary raw material

Implements Waste Framework Directive Article 8a(1)(c).

The WEEE system remains largely invisible. In most Member States, flows are still tracked through paper-based waste movement records and annual aggregate reporting. No actor has a complete picture of how WEEE moves from the household to the treatment facility, and by the time a problem appears in aggregate statistics it has already become structural.

Digital reporting for the handovers

Each time WEEE changes hands, the transfer should be digitally recorded to answer the questions: **what, to whom, when.**

- **For the actor/collector handing the WEEE over:** The actor handing over selects the destination from a pre-defined public list of authorised operators; the receiving operator confirms receipt, closing the record automatically.
- **Where the collector is part of a PRO-organised collection, the notification can be submitted by the PRO on its behalf.** No new administrative function is created for small actors. [e.g. a retailer, a municipality or a logistics operator should either digitally notify the handover to the national register, or rely on the authorised receiving operator (PRO or treatment operator) with which it already has a contract to carry out the obligation on its behalf].



THE ITALIAN MODEL

Italy already runs its WEEE flows through a coordinated, contractual and reporting structure.

1. A national clearing house (CdC RAEE) coordinates the flows between producers, collection points and treatment operators.
2. Only operators that meet recognised treatment standards are authorised to receive WEEE from PROs, and these operators are publicly listed in a closed list. Operators that do not comply simply cannot receive the material.

- **A public list of Authorised Receiving Operators.** The legislation should define authorised receiving operators as: (i) PROs and individual schemes, (ii) certified preparation-for-re-use, (iii) treatment and recycling operators; requiring Member States to list them publicly in the national register.

WEEE may flow only to a listed operator: when an actor hands over WEEE and records it digitally, it selects the destination from that list. Any transfer to an operator outside the list counts as leakage and constitutes a breach subject to penalties. Competent authorities should be able to see the data as it arrives at the National Register and can follow flows in real time, rather than depending on inspections or complaints that arrive after the material is gone.

THIS ALREADY EXISTS

The technology and the digital infrastructure to track waste in real time already exist today, both at national and at EU level. The WEEE reform should build on them:

1. At national level, Member States already operate digital waste-traceability registers. **Italy runs RENTRI**, the national electronic register that has replaced paper waste-movement records with structured real-time data.
2. At EU level, since May 2026 the procedures for cross-border waste shipments must be carried out electronically through **the Digital Waste Shipment System (DIWASS)**, the central platform established under the Waste Shipment Regulation. It replaces paper notification and consignment documents with a single real-time exchange between operators and authorities, works as a central hub to which national systems connect, and already binds every actor in the chain, including brokers and intermediaries that never physically hold the waste.

WEEE is the waste stream that would benefit the most from this digital architecture: in fact, it is **the stream which keeps the highest value at the point of discard and is the principal source of the secondary critical raw materials Europe needs.** The material that should become tomorrow's critical raw materials cannot be allowed to disappear, untracked, out of the system today. The reform is not being asked to invent a tool, but to apply proven ones where it is



most relevant.

Traceability must extend downstream to the secondary raw material. Operators already compliant with EN 50625 already generate this data: input streams, output fractions, mass balance, destination of fractions. We ask that it be reported once, through the national register, instead of through multiple parallel bilateral reports. Resulting in aggregated, EU-level output dataset which can be used as market intelligence to plan investments in the sector. The reason recovery of critical raw materials is negligible today is the absence of reliable data on what compliant treatment actually yields. Verified output data is the basis on which investment in European treatment, refining and recycling capacity can be planned.

Priority 3 — Collection and recovery targets that reflect reality **Collection targets.**

The current methodology is fundamentally flawed. It ignores long product lifespans of 10 to 15 years, market saturation and consumer hoarding, and it structurally penalises product categories with longer life spans. Targets should instead be aligned with the WEEE actually generated, based on the products' expected discard rates, through a dynamic methodology that integrates average lifetimes, technology and market trends, and consumer behaviour.

The methodology must also account for waste prevention legislation: where the Ecodesign for Sustainable Products Regulation successfully extends product lifetimes and promotes repair, collection volumes will fall for the right reasons, and the target methodology must recognise this rather than record it as failure.

Achievement of collection targets should remain a Member State responsibility, since only public authorities hold the enforcement powers over the full range of actors whose behaviour determines collection performance.

Recycling and recovery targets

Targets should move from broad weight-based waste streams to granular targets by product category or cluster and by material stream. Through the European standardisation process, mandatory quality specifications for recyclates should be introduced, shifting the focus from volume to high-value recovery, preventing downcycling and enabling secondary raw materials to genuinely compete with virgin resources.

Preparation for re-use should remain part of the combined recycling and recovery target, keeping product life-extension a recognised and viable compliance pathway. Defined



recycling rates should also pragmatically account for energy consumption, safety and the necessary destruction of hazardous legacy substances, which can legitimately limit the achievable rate.

Recyclers should be legally obliged to report all WEEE treated at their facilities, not only the quantities received from producers or PROs. This is the only way to establish the true national collection and recycling rates and to measure the real size of the flows currently bypassing the EPR system.

Priority 4 — A level playing field for online sales

Operationalises the distance-sales clause already in Article 8a(5).

Cross-border e-commerce has created a compliance gap the current Directive cannot address. A producer established outside the EU, selling electrical and electronic equipment to European consumers through a platform, is technically subject to registration obligations but in practice it is beyond the reach of any national authority. National registers cannot see these flows; competent authorities have no jurisdiction over entities established outside the Union. The result is a *de facto* subsidy for the non-compliant seller, paid for by every registered producer that carries the full cost of the system. And the same gap has a second, more serious dimension: the producer that evades WEEE registration may also be non-compliant for other requirements, such as chemical, ecodesign or safety legislation. The unregistered producer and the non-compliant product are two faces of the same problem, a seller operating outside the reach of European authorities and laws.

No national authority can chase millions of individual sellers. The only entity with the visibility and the technical means to act is the online marketplace itself: it knows its sellers, processes their listings and already runs verification routines for tax, product safety and intellectual property. The target is the non-compliant seller hiding behind a platform, not the compliant European distance seller, who is undercut by the free rider as much as anyone.

Any credible solution must place clear, enforceable obligations on the marketplace; there is no realistic alternative.

What we propose:

- **Marketplaces as gatekeepers:** producer registration should be verified as part of the same gatekeeping function platforms already perform under the Digital Services Act and the General Product Safety Regulation.
- **Verification before listing, and for as long as the seller sells:** before enabling any EEE offer, the marketplace verifies the seller's producer registration number;



compliance is re-checked on an ongoing basis, not only at onboarding

- **Comply-or-block:** Where registration is missing or cannot be verified, the listing must not reach European consumers. A platform that enables such a listing anyway assumes the producer's obligations for that equipment. **Comply-on-behalf option:** Marketplace may discharge these obligations directly, paying registration fees and reporting placed-on-market quantities on the seller's behalf through a "comply-on-behalf" arrangement.

The authorised representative must be preserved. The authorised representative remains a distinct, full-liability instrument: a person established in the destination Member State who assumes legal responsibility for a non-EU producer's compliance. It is the only effective jurisdictional anchor for non-EU producers and cannot be replaced by a marketplace "comply-on-behalf" service, which handles registration mechanics only and carries no equivalent liability.

Priority 5 — Mandatory high-quality treatment on the right legal basis

According to the WEEE evaluation study, only around one third of WEEE treatment facilities in the EU currently officially operate in compliance with CENELEC EN 50625 standards, the EU-level quality benchmark for WEEE treatment. Substandard treatment is cheaper, and as long as it remains legal it will keep pulling material away from the operators who have invested in compliance. This is both an environmental failure and a competitive distortion, and correcting it is a shared demand of producers, PROs and recyclers alike.

- **Compliance with EN 50625 and EN 50614, or an equivalent recognised under national law, should be the condition for authorisation to receive and treat WEEE.** This ensures WEEE can only flow to operators meeting the standard, and that substandard operators are excluded from the market rather than merely undercut within it.
- **Output-based reporting: traceability from collection to secondary raw material.** An operator compliant with the EN 50625 standard is, today, already reporting critical data: input streams, output fractions, treatment efficiency, mass balance and the destination of fractions are part of what compliance with the standard already requires. We are not proposing to invent a new reporting burden for compliant recyclers. We are asking that the report already produced for the standard: **(1)** be reported once, in a single channel, instead of through multiple parallel bilateral reports to PROs, authorities and statistics bodies; and **(2)** that it use **harmonised EU fraction codes** so the figures are comparable across Member States.



- **The Commission should issue a formal standardisation request now**, so that the standards are updated and ready when the new legislation applies. EN 50625-2-3 in particular requires urgent revision to address modern insulation foams and vacuum insulated panels. The legislative text should provide for the dynamic, regular review of the harmonised standards to keep pace with technology and market realities.

Priority 6 — Sound governance of producer responsibility

EPR only delivers when the organisations that operate it are well governed, transparent and accountable. The revision should set the governance rules of producer responsibility clearly in the legislative text.

- **EPR schemes are industry-led.** PROs are established, governed and controlled by the obligated producers whose responsibility they discharge. The payment of an EPR fee is linked to the delivery of a waste management service; assigning producers' obligations to state-run organisations converts fees into taxation, breaks the link between payment and performance, and removes any guarantee that contributions are reinvested in collection and treatment. The legislation should establish the industry-led character of EPR schemes, under public oversight.
- **Common EU authorisation conditions for PROs.** Every PRO should be authorised against the same core conditions across the Union: adequate financial guarantees, non-discriminatory membership terms open to all producers including SMEs, transparent fee structures, and public annual reporting on costs, collected volumes and achieved outcomes.
- **A coordination mechanism wherever PROs compete.** In Member States with more than one PRO, a clearing house should allocate collection responsibilities among schemes, guarantee coverage of the entire national territory including unprofitable areas, and manage financial settlement between PROs.
- **PRO verification audits complement public enforcement.** PROs and individual schemes should be entitled to audit the operators they contract and finance, with findings available to the competent authority. Public inspection capacity alone will never provide sufficient audit coverage; those who pay for the system must be able to verify what they pay for. Enforcement powers themselves, inspections with legal effect, penalties, withdrawal of authorisations, remain exclusively with the competent authority and cannot be delegated.



Priority 7 — One registration, one reporting format across the Single Market

Producers placing EEE on the market across multiple Member States currently face 27 different national registers, 27 different data formats, 27 different reporting calendars, and PROs applying proprietary coding systems on top. This fragmentation imposes significant administrative costs on compliant operators while providing no environmental benefit. It also acts as an artificial barrier to switching between PROs, due to data incompatibility, hindering competition rather than rewarding the ones that deliver better service.

Concrete proposals:

- **Registration.** A Union registration portal through which producers register once, with a single harmonised form covering legal identity, authorised representative where applicable, contracted PROs and product categories, building on Implementing Regulation (EU) 2019/290. Authentication via the eIDAS 2.0 e-seal pre-populates legal entity data and eliminates duplicative identity checks. The portal distributes the dataset automatically to the national registers of the Member States selected by the producer; national registers verify, activate the registration and enforce on the basis of the data received, and may not require its resubmission.
- **Reporting.** PROs across the EU should develop, jointly and in coordination with national registers, one harmonised EU reporting format — calibrated to a level of granularity that producers can realistically populate from their own sales data using the same dataset for every Member State. Where a PRO requires greater granularity for its internal fee structure or sub-category management, the translation is its own operational responsibility, carried out through its internal systems. The harmonised format is what the producer submits; what the PRO does with it downstream is not a producer obligation. This removes proprietary formats as artificial switching costs without touching any genuine competitive advantage PROs derive from their networks, service quality or financial soundness.

Alignment with LIFE4EPR

The LIFE4EPR project — co-funded by the EU and bringing together national registers, PROs and producer associations — is actively developing policy options for an **EU-wide harmonised EPR registration and reporting architecture**. We welcome this work: the project correctly identifies registration fragmentation and proprietary reporting formats as central systemic failures across multiple waste streams, and its focus on a **single**



harmonised data structure (both for registration and reporting) that national systems should adapt to, reflects the right design logic. Its outputs should directly inform the legislative text of the new WEEE Regulation.

Priority 8 — Enforcement and structured Member State accountability

The most fundamental failure of the current Directive is the absence of enforceable accountability for Member States. Competent authorities face no structured duty to inspect, no requirement to report on enforcement performance, and no graduated consequence for systemic underperformance; the Commission's only tool is full infringement proceedings, too blunt and too slow for system failures of this kind. This is why enforcement quality varies so dramatically across the EU, and why operators rationally register where compliance pressure is lowest. Enforcement is the issue on which the whole value chain agrees most strongly, and on which the current proposals are weakest.

- **Mandatory national compliance and enforcement programmes.** Each Member State should adopt a programme containing quantified targets: inspection rates by operator category, response timeframes for anomaly referrals, minimum enforcement follow-up rates, covering every category of operator from producers and marketplaces to collection points, logistics operators and AROs.
- **Minimum operational standards for market surveillance.** The legislation should define the baseline resources, personnel and audit frequency Member States must maintain, so that enforcement capacity is a legal requirement and not a budgetary afterthought.
- **Biennial, public, comparable reporting.** Every two years, performance against the programme targets should be reported to the Commission in a structured public format: inspections carried out against targets, anomalies followed up, non-compliance detected, penalties applied, progress towards collection and recycling targets.
- **Automatic escalation.** Where two consecutive reports show systematic underperformance, the Commission must issue a formal recommendation; persistent failure to respond constitutes the basis for prioritised infringement action.

A PROVEN MODEL

The EU already runs it for **air quality plans/ waste prevention plans**: Member States draw up plans with targets, which they then share with the Commission which can keep them accountable. The same structured, plan-and-review accountability is what WEEE enforcement has always lacked.



Conclusion

We are jointly asking for a WEEE Regulation that gives every actor a defined role, makes WEEE flows traceable, sets targets that measure reality, reserves the market for quality treatment, closes the online free-riding gap, governs EPR transparently, harmonises registration and reporting across the Single Market, and holds Member States accountable for enforcement. These eight priorities are the architectural conditions under which extended producer responsibility can actually function, and under which Europe can turn its own electronic waste into the secondary raw materials its industry needs.