

Implementation of the Waste Electric and Electronic Equipment Directive in the EU



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Implementation of Waste Electric and Electronic Equipment Directive in EU 25

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PREFACE

Electrical and Electronic Equipment (EEE) is developing fast and spreading over every part of modern life. This equipment includes diverse substances that may cause serious damage to the environment and have adverse effects on human health so it is essential to manage the waste (WEEE) resulting from EEE in a proper way. Waste Electrical and Electronic Equipment (WEEE) has been identified as a priority area to take specific measures on a European scale. The Directive 2002/96/EC on WEEE along with the complementary Directive 2002/95/EC on the restriction of the use of certain hazardous substances in Electrical and Electronic Equipment (EEE) seeks to reduce the environmental impacts of WEEE. The Commission foresees that out a review of the WEEE Directive will be carried out in 2008.

This report stems from a request from DG Environment to carry out a research study to gain full understanding into the implementation of the Directive by the Member States and to obtain feedback on potential areas for revision. The review of the implementation of the WEEE Directive in EU Member States on which this report is based has been undertaken by AEA Technology in association with the Regional Environmental Centre on behalf of the Joint Research Centre Institute for Prospective Technological Studies.

The report identifies and describes regulatory and management approaches considering WEEE at worldwide level. It outlines key trends and describes the main benefits and problems in the implementation of the WEEE Directive. The report identifies opportunities for harmonisation and improvement in the way the Directive is being implemented across Member States.

Approximately 100 respondents and organisations have been contacted in the course of this project, representing a broad range of WEEE legislators, compliance schemes and industry in all of the EU-25 Member States. A range of industry views has also been sought amongst managers with a European wide perspective or responsibility in major WEEE producers.

A review seminar has also been held in Brussels attended by representatives of government, compliance schemes and industry from across the European Union to discuss the findings

The development of legislation and compliance structures is an ongoing process in all EU countries. The final national legislative and operational situation will not be clear until the end of 2006 and its effectiveness will remain unclear for a considerable period of time. This report reflects the situation at the time of research and writing in late 2005.

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Introduction

In the European Union, electro-scrap is the fastest growing waste stream, growing at 3-5 % per year (source), which is three times faster than average waste. About 90 % of this waste is still land filled, incinerated or recovered without any pretreatment. This allows the substances it contains, such as heavy metals and brominated flame retardants, to make their way into soil, water and air where they pose a risk to human health and cause environmental damage. Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) along with the complementary Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) seeks to reduce the environmental impacts of WEEE throughout all stages of the equipment's lifecycle, particularly at the end-of-life stage, by encouraging the end-of-life management of the product, eco-design, life cycle thinking and extended producer responsibility. The transposition of the WEE Directive was due before 13 August 2004.

The key aims of the WEEE Directive are thus to:

- Reduce WEEE disposal to landfill;
- Provide for a free producer take-back scheme for consumers of end-of-life equipment from 13 August 2005;
- Improve product design with a view to both preventing WEEE and to increasing its recoverability, reusability and/or recyclability;
- Achieve targets for recovery, reuse and recycling of different classes of WEEE;
- Provide for the establishment of collection facilities and separate collection systems of WEEE from private households;
- Provide for the establishment and financing of systems for the recovery and treatment of WEEE, by producers including provisions for placing financial guarantees on new products placed on the market.

The setting up of efficient collection schemes is necessary to ensure the achievement of the targets set in the Directive. Following the subsidiarity principle, the Directive only defines general requirements to comply with mandatory collection and recycling objectives. The modalities of the logistics and the organisation of the take-back schemes are left to the choice of Member States. Before the WEEE Directive came into force several European countries (e.g. Belgium, the Netherlands, Sweden and Denmark) defined national regulations and organised management schemes for WEEE. These systems respond to sometimes very different national situations and philosophies. Some of these countries will have to adapt their national laws when implementing the WEEE Directive. Other countries that have not developed any management systems are developing new ones in order to comply with the Directive.

This report aims to achieve the following:

- Outline the key trends in the development of national and pan-national approaches to WEEE Directive compliance in the initial phase of development;
- Present a balanced overview of the opinions of key experts working in government, compliance organisations and industry as to the key challenges involved in the implementation of the Directive;
- Identify opportunities for harmonisation and improvement in the way the Directive is being implemented across the Member States;

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- Provide feedback to the European Commission on potential areas for review in 2008.

Transposition

The countries already having WEEE management schemes in place were naturally influential in shaping the Directive and, thus, the adaptation of their national legislation to the Directive is relatively straightforward. The changes needed are generally of a complementary nature and regard issues like individual producer responsibility, labelling of products, financial guarantees needed in order to place a product on the market and collection and recycling targets.

The situation is very different for other countries, which do not have a WEEE culture. It is fair to say that they have faced significantly greater problems in developing the required legal and operational infrastructure. Different systems have been developed, trying to apply more market based approaches with multiple providers of take back services, apart from the collective single compliance scheme models being used in the already existing systems.

Several countries have been late with the transposition of the Directive and many of the countries that did create a timely transposition did so by simply translating the EU Directive, without specifying how the legislation would be applied in practice. Further secondary regulations and clarifications are thus needed.

The interaction and overlap with other areas of legislation, e.g. hazardous waste regulations, transfrontier shipment regulations, health and safety related marking etc., may have delayed the process of transposition and development of national legislation.

In addition, where countries experience significant cross-border trade and imports, the efforts devoted to coordinate the implementation of the legislation between neighbouring countries and the tendency to resist first-mover disadvantage, have caused further delay.

Collective and competitive systems

There are two clear generic categories of national organisation, the national collective system (monopoly) and the competitive clearing house system. National legislators as well as producers have different views on the preferred system; some support the laws of the competitive market while others see the benefits of managing risk collectively.

The collective system is a dominant national system which is responsible for collection, recycling and financing of all (or the vast majority) of WEEE within national boundaries. This is the general approach in the countries with established WEEE systems. Their legal status differ from country to country, but they are generally non-governmental, not-for-profit companies which are set up and owned by one or more trade associations. They are organised into product categories in order to focus on achieving maximum efficiency in their recycling operations and to identify markets for recycled material and product reuse.

The clearing house model is again a national framework in which multiple partners (producers, recyclers, and waste organisations) can provide services. The government ensures that there is a register of producers and defines the allocation mechanisms, and reporting and monitoring systems. The responsibilities of a central national coordination body are to determine the collection obligation of each producer (via the national

register) and to assign this obligation to the compliance scheme action on behalf of the producer as well as to establish an allocation mechanism that enables compliance systems to indeed collect WEEE in an equitable manner from collection points over the territory. Several Member States, especially bigger countries, opt for this model and can have five to six market entrants with even more expected although there may be some market consolidation as economies of scale come into play. The main reason for this model is to avoid a monopolistic situation and to drive costs down.

There are advantages and disadvantages with both systems. National collective schemes properly managed are considered by many stakeholders as providing the simplest and most effective route to collecting and recycling WEEE. Producers who support collective models identify the additional costs of managing a national clearing house, separate collection containers, extra logistics etc. and point to economies of scale of the collective approach, especially in small countries where volumes cannot create a viable market for multiple systems.

Additionally, collective systems as run in the Netherlands, Belgium and Sweden are “tried and tested” and represent the only approach that has so far been shown to work in practice. The clearing house model, on the other hand, lacks experience and data to make good analyses and comparisons with existing collective schemes.

The supporters of the clearing house model however point out that collective scheme does not encourage cost reduction which on the other hand exists in an environment where competition is at play all the time and economics of the supply chain is a main driving factor. Numerous stakeholders indicate that market-based systems are designed to meet the minimum levels of collection and recycling in the most cost-efficient manner, but without any pressure to exceed them. This is compliance at least cost, without necessarily providing an incentive for additional environmental or behavioural improvements beyond that stipulated in legislation. Collective schemes on the other hand have invariably exceeded the collection and recovery targets set for them by national governments, they thus build a stronger recycling ethos and invest more in behavioural change amongst consumers. It can be seen how the clearing house model is the preferred industry route where the market is large and the potential cost savings are substantial. For smaller markets, including those countries with existing schemes, the benefits of market mechanisms are not big enough to outweigh the greater simplicity of structure and financing of collective models. However, opinions are split and most countries have faced a struggle between those pushing for a collective scheme and those supporting a more market based approach. Where countries have a strong Chamber of Commerce and tradition of centralised and collaborative decision making, producers have tended to resolve these issues amongst themselves and present a united negotiating position to government. Nevertheless, where this tradition is less strong, governments have been forced to make the choice for industry.

While legislators in Member States have spent considerable time studying the legal and operational approach in those countries with established WEEE schemes, all have indicated the importance of building systems that meet local specifics of culture, geography and industry, and that take into account existing practices of waste collection.

As a final recommendation, the majority of scheme legislators and managers suggested that countries should get any system up and running before committing themselves to performance and target setting. The prevailing view was that there are simply too many

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unknown variables to accurately predict volumes and costs, and that only through experience will the judgement be made about what is effective.

In this context, Pan-European compliance schemes should also be mentioned. Producers that operate mostly on an EU basis will look to create efficiencies at an EU level. Such schemes may enable the necessary evolution and consolidation of the WEEE take back market and therefore deliver efficiency gains that benefit customers. They can also have a positive impact on the environment through proper technology investments enabled by economies of scale and optimisation in transport.

Whilst legislators at member state level as well as managers of national compliance schemes felt the medium term options for Pan European compliance schemes were limited, there was a general level of sympathy amongst individual producers to the eventual development of such an approach, although it was admitted that the implementation might prove difficult in practice.

The most prominent EU wide system is the European Recycling Platform (ERP), an undertaking by Hewlett Packard, Sony, Electrolux and Braun to develop Pan -European compliance structures. It contracts operators to design, operate and manage all aspects of the compliance process, (although activity remains in planning rather than operational). To work effectively, the ERP must establish national schemes in several countries and the gain legal approval to operate. The ERP does not need to transport WEEE outside of the country of origin, but needs to develop pan-European agreements with networks of providers with operations in all ERP countries. Supporters of such an initiative regard it as an important opportunity to develop much-needed alternatives to the national schemes, to create competition, which in turn, will stimulate efficiency and cost reductions. However, many legislators at Member State level as well as producers remain sceptical, at least in the short term. This is a common view amongst the supporters of the collective system and the logistical difficulty of coordinating a scheme on such a scale was noted to be a weak point. Others even thought such a scheme would be prevented from working successfully as legislative requirements differ so much in each country. If national compliance schemes exist, a Pan-European compliance scheme will depend on them and will negotiate contracts with them as a service provider.

The potential for this kind of system was seen as slightly higher in the medium to longer term, but only with much greater coordination at European level, with, e.g. a European register of producers and quantities, a European clearing house, etc.

Existing national approaches

Some Member States as well as Norway and Switzerland had established WEEE take-back and recycling schemes before the EU Directive was put in place. The Netherlands operates two systems, ICT Milieu and NVMP, and the other countries have one with Recupel in Belgium, El Kretsen in Sweden, El Retur in Norway and SWICO in Switzerland. These existing schemes are presented and compared in the table below. Comments on their performance and how they relate to issues being discussed around the Directive are given in the following pages, not needed

Collection targets and recycling rates

	Recupel	ICT Milieu	NVMP	El Kretsen	El Retur*	SWICO*
Country	Belgium	Netherlands	Netherlands	Sweden	Norway	Switzerland
Established	2001	1999	1999	2001	1999	1994
Full time staff	25	2	12	12	7	4
2002						
Operated by	Producers	Producers	Producers	Producers	Producers	Producers
Quantity of WEEE Collected. kg (2002)	35,875	9,426	65,856	74,756	35,787	37,400
Quantity of WEEE Collected. kg per capita (2002)	4.0	0.58	4.3	8.4	8.0	3.3 (8.4 including SENS)
Total cost per kg collected including overhead/rese rve fund formation in Euro (2002)	1.36	0.48	0.61	0.47	0.60	0.80
Direct recycling and transport costs per kg in Euro (2002)	0.54	0.45	0.35	0.45	0.52	0.64
Estimated reserve	c. 25,000,000 Euro (e) Future Provision	n/a	c. 80 Million Euro (e) Future Provision	c. 9 Million Euro (e) 3 month operating reserve	c. 18 million Euro (e) 12 Month Operating reserve	c. 10.5 million Euro (e) 6 month Operating reserve
Recycling performance (including energy recovery)	80%	89%	80%	90%	84%	97%
Retailer take back	Yes	Yes	Yes	Limited	Yes	Yes
Collection sites	Yes	Yes	Yes	Yes	Yes	Yes
Number of financing model according to product sectors	1 Fixed fee per Unit	1 Actual recycling costs based upon market share in arrears	1 Fixed fee per unit	3 Fixed fee per unit/kg % of sales price Actual recycling costs based upon market share in arrears	3 Fixed fee per unit Actual recycling costs based upon market share in arrears Customs levy fixed fee per unit imported	2 Fixed Fee per unit Fixed fee per product price band
Visible recycling fee	Yes	No	Yes	No	Yes (White Goods Only)	Yes
Historic/future split	Yes	No	Yes	No	Yes	No
Household/Commercial split	Household only	Both	Household only	Both	Both	Both

The Directive states that each Member State should collect 4 kg of WEEE per capita. Legislators at member state level on the whole believe that this is good, it is high and will require work, although there is inevitably an element of compromise between the most and least advanced countries in target setting. The targets are obviously not challenging for countries that have established schemes and do not provide any stretch, whereas other countries without WEEE saturation may struggle to comply without importing WEEE. In the existing schemes, Sweden and Norway collect about 8 kg per capita while the other countries reach about 4 kg. Moreover, the existing systems show

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a recycling rate of about 80-90 % (including energy recovery). It is still very difficult to make comparisons of recycling and treatment performance due to varying standards and definitions between countries.

Logistics

There are several channels for the collection of WEEE although there are three primary ones: municipal sites, in store retailer take-back and producer take-back. The majority of schemes have organised themselves primarily around the former and some of the existing ones use it exclusively. Others encourage retailer participation but this normally does not exceed 30 % of total volume. While municipal collection sites are usually free for households to use to an unlimited extent, take-back through retailers is usually also free but can be dependent upon the purchase of a new product. The producer take-back system may apply to larger commercial equipment and operates on a new for old basis.

Those schemes that use multiple recyclers and transport firms and that have been through a process of competitive tendering have managed to control and reduce costs substantially while those that operate through a single supplier have failed to deliver similar reductions in contract costs. Several schemes deliberately make use of multiple firms to ensure that in a monopolistic situation with cost problems does not result.

It is furthermore considered that the success of a WEEE programme will in part be dictated by the clarity with which it can be explained to the consumer and the ease to which the consumer can engage with the collection and financing system. Different collection systems for different products cause consumer confusion and reticence and detract from efficiency.

Visible fee

Many producers support the option given in the Directive to indicate to consumers the costs of recycling historical waste for a period of eight to ten years in the form of a “visible fee”, i.e. a separate part of the product price and several industry representatives think the final deadline to allow this system should be extended indefinitely. A mandatory visible fee is seen by many producers as providing some cushion against the impact that the Directive might otherwise have. Where the visible fee is not mandatory, it tends to disappear and the cost is instead absorbed into the product price. The cost of WEEE compliance can be significant in highly price sensitive and competitive low margin markets such as consumer electronics, and will then most likely be borne by the producer in the short term.

All the schemes reviewed have settled upon some form of current market share, either through fees on products sold, or allocation of actual costs to products placed on the market. All national scheme legislators and scheme managers regarded sorting by brand as highly inefficient and costly by comparison.

Regarding the financial model, there is a split view between the Brown and White goods sectors on one hand and the ICT sector on the other. This reflects the different preferences for dealing with historic WEEE and orphan products (whose producers no longer exist). The Brown and White Goods sectors have a significant historical waste and the White Goods sector especially supports visible fee schemes such as Recupel (Belgium) and NVMP (the Netherlands). They are less supportive of ex post based market share schemes such as ICT Mileu (the Netherlands). The opposite is true for ICT

firms, which have fewer historic liabilities. Schemes such as El Retur (Norway) and El Kretsen (Sweden) have demonstrated the flexibility to accommodate both financing systems within a single organisation.

Various options are possible for the fee structure – actual costs of recycling, projected costs of recycling per product category, cross subsidisation (i.e. fees on some product group supporting the recycling of another one). The more complicated the fee structure, the more demanding it is in collection and administration. There is a challenge to balance administrative efficiency against the wish to relate real costs of recycling a given product to the fee charged. There is inevitably a point at which it is administratively more efficient to band different products together into one product grouping or to set a fee according to the retail price. El Kretsen (Sweden) as well as El Retur (Norway) have approached this issue by allowing multiple financing systems for different product categories. In the Netherlands, ICT Mileu and NVMP operate as separate systems precisely because this flexibility of financing could not be achieved. Furthermore, the Nordic schemes use a more complex system of up to 50 product categories, each with their own price allocations. This kind of system provides a better reflection of the costs of recycling the individual products but has led to some complaints from industry about the workload and level of detail that is required to compile the returns. Where fee-based systems are used, the paperwork and monitoring requirements increase significantly according to the numbers of product classifications and fee bands, both for the scheme and producers. However, in a simplified system with fewer and bigger groups/categories, a higher level of cross-subsidising between products is inevitable with recycling fees bearing little relationship with actual recycling costs for a given product.

Financial guarantee

The Directive requires that each producer gives a financial guarantee for recycling when placing a product on the market and, thus, the Member States need to ensure that such guarantees are provided by all producers. This is essential in avoiding the remaining producers financing the recycling of products from “free-riders” who have disappeared or cannot be identified.

Free-riders currently represent between 10-20% by volume of products placed on the market (the percentage of non compliant firms being higher). Many producers suggest legislation which only allows products to be sold where their producers could provide proof of registration. National collective compliance schemes are generally thought of as a way of ensuring good market coverage and reducing the problems of free-riders and orphan products, provided that full enforcement by competent authorities is guaranteed. Enforcement is considered to be the key issue regarding the cost effectiveness and equity of the schemes.

Furthermore, when legislation promotes joint compliance schemes rather than individual ones the guarantee may take into account inflation in collection and treatment costs, thereby making it prohibitively expensive to undertake an individual route.

Individual producer responsibility

One of the main purposes of the WEEE Directive is to support environmentally friendly product designs, i.e. products that can be easily dismantled, recovered, reused and recycled. Firms may have an incentive to alter their product’s design if it allows for lower product recycling costs. Producers will invest in eco design if they can recover the benefits of their investments. However, several key countries have dropped the

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Individual Producer Responsibility (IPR) concept out of their final transposition, rendering the eco-impact of the Directive less effective. Many producers express their disappointment about the missing incentives in the Directive for better environmental performance, as they will be charged for their products on, e.g. a weight basis, independently from the attributes of their products in the same category. Producers could reap the benefits of potential eco-design if individual and collective producer compliance concepts were allowed. Although all countries actually do that, in practice, the likelihood of this occurring is significantly reduced through the creation of barriers to such compliance by national legislators. Criteria are almost always set in a way that discourages IPR and to encourage producers to join a single national collective system. The motivation for this behaviour is to ensure equity and to make administering WEEE activities easier for government by reducing the burden of monitoring and approvals required.

However, it should be stressed that some companies see eco-design as being an issue which is already being tackled outside of the scope of this Directive.

Product scope and producers

Several stakeholders report a level of uncertainty about who is responsible for the definition of products covered by the Directive. National legislators often ask for clarification from the Commission on whether products are included in the scope before issuing national lists of advice. The Commission may provide non-binding advice, but the responsibility is with the Member State.

Furthermore, there is a concern among industry that some Member States may choose to adopt the widest scope possible and not limit themselves to those products which are part of the categories listed in Annex 1A. This could cause confusion and problems for industry. Many Member States are currently examining possible “grey area” products and developing guidelines to assist companies in deciding whether their products are covered by the Directive or not.

The Directive sets responsibilities for those placing electrical and electronic equipment on the market. However, companies find that the definition of “the producer” is unclear. The Directive states that a producer is basically a party who manufactures, resells, exports or imports EEE into a member state. In the process of transposing the Directive, some Member States have restricted this concept to their national territory. However, the European Commission has expressed that when a product is placed on the European market it must afterwards circulate freely between Member States. The situation creates problems on potential product re-marking, change of visible fee and product traceability. An intensive collaboration between Member States’ systems with an extensive information exchange on the level of import and export is necessary in order to avoid multiple financing.

Moreover, there are some discrepancies amongst Member States as to whether producers (i.e. importers) who do not operate in particular the country but through direct sales instead should be registered to the system.

Factors that impact the operation of compliance schemes

There are a number of factors that will have, depending on the characteristics of each country, varying impact on the operation of compliance schemes. Issues in particular are:

- Distance and geography, with smaller distances reducing costs for transport and logistics.
- Population size and density, where a higher population enables the generation of economic efficiencies and economies of scale.
- Cost of labour, as collection, sorting and treatment are highly labour intensive.
- Length of time in operation as, with time, there are greater opportunities to fine tune the system, negotiate better contracts with suppliers, rationalise overheads and invest in capacity.
- Consumer behaviour, with established European compliance schemes owing their success to prevailing consumer recycling behaviour. The level of WEEE recycling awareness in relation to specific product groups is also a key driver of success.

Opportunities for harmonisation at the EU level

The progress to date of the transposition of the WEEE Directive into national law already reveals major differences from one legal system to another and many stakeholders believe that national implementation models will be likely to continue to diverge as they develop. According to producers, there is a need to coordinate national compliance schemes and to harmonise measures at EU level to align processes and costs and to avoid discrepancies and barriers to fair competition.

The most likely area of harmonisation of processes is probably a producer register. This would initially require the standardisation of processes for producer notification and registration across the EU. Furthermore, attention should be given to harmonising treatment standards across the EU, as it is felt that currently, quality of recycling varies considerably. The quality of recycling facilities is thus considered to be an important area of cooperation. Moreover, there is on-going work on issues like financial guarantees and how they will work.

Future development

There will be significant growth and consolidation of collection and recycling services to enable more efficiencies and economies of scale. Household WEEE will be recycled in larger sites as volumes will increase significantly. This will allow better technology and the cost is expected to decrease. For the next five years, recycling costs are expected to decrease in general. However, waste handling, transport and sorting are major parts of the overall WEEE cost and these will probably remain steady as these are difficult to optimise, in particular for products at their end of life.

Regarding organisation, it is believed that some key contractors will appear both at national and European level (with excellent logistics and high-volume recycling plants) and absorb the smaller stakeholders.

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1 Outline of the WEEE Directive

The following table outlines the main features and characteristics of the WEEE Directive:

Directive Rationale	<p>In the EU, electro-scrap is the fastest growing waste stream, growing at 3-5% per year, which is three times faster than average waste source. Each EU citizen currently produces around 17-20 kg of e-waste per year. Some 90% of this waste is still land filled, incinerated, or recovered without any pre-treatment. This allows the substances it contains to make their way into soil, water and air where they pose a risk to human health. Based on the premise of producer responsibility and that improved product design can better facilitate recycling and disposal of products at end-of-life, the key aims of the WEEE Directive are to:</p> <ul style="list-style-type: none"> Reduce WEEE disposal to landfill; Provide for a free producer take-back scheme for consumers of end-of-life equipment from 13 August 2005; Improve product design with a view to both preventing WEEE and to increasing its recoverability, reusability and/or recyclability; Achieve targets for recovery, reuse and recycling of different classes of WEEE; Provide for the establishment of collection facilities and separate collection systems for WEEE from private households; and Provide for the establishment and financing by producers of systems for the recovery and treatment of WEEE, including provisions for placing financial guarantees on new products placed on the market.
Member State Obligations	<p>The EU does not impose the requirements of its Directives directly on companies or consumers, but rather on its Member States. It is the responsibility of the Member States to implement policies to ensure compliance with EU Directives. The EU can impose penalties on Member States that fail to comply.</p>
Legal Basis	<p>The legal basis of the WEEE Directive is environmental protection, meaning that the EU sets a minimum standard and Member States can choose to implement more restrictive policies. For example, a country may set higher recycling targets than those contained in the Directive and/or require that they be achieved by an earlier date.</p>
Scope	<p>The WEEE Directive is very broad in scope, covering virtually all electrical and electronic equipment used by consumers or intended for professional use that may end up in the municipal waste stream,</p>

Outline of the WEEE Directive

	<p>including products sold in the EU from abroad and products sold electronically. There are ten categories of products covered:</p> <ol style="list-style-type: none"> 1. Large household appliances (refrigerators, washing machines, stoves) 2. Small household appliances (vacuum cleaners, toasters, hair dryers) 3. Information and telecommunications equipment (computers and peripherals, cell phones, calculators) 4. Consumer equipment (radios, TVs, stereos) 5. Lighting (fluorescent lamps, sodium lamps) 6. Electrical and electronic tools (drills, saws, sewing machines) 7. Toys, leisure, and sports equipment (electric trains, video games) 8. Medical devices (ventilators, cardiology and radiology equipment) 9. Monitoring instruments (smoke detectors, thermostats, control panels) 10. Automatic dispensers (appliances that deliver hot drinks etc).
Extended Producer Responsibility (EPR)	<p>To encourage designs that facilitate repair, reuse, disassembly, and recycling, the WEEE Directive establishes the principle of EPR for dealing with this waste stream. Producers are financially responsible for taking back their own products at end of life and managing them in accordance with the Directive. (“Producer” is defined as the brand name on the product or the importer of the product.) Producers may form a collective system to fulfil their obligations. They may not use design features that prevent products from being reused unless such features provide overriding safety or environmental benefits. Retailers are supposed to provide free take-back on an “old for new” basis. For example, a consumer buying a new TV may bring back an old TV. However, the Directive allows Member States to waive this provision.</p>
Separate Collection	<p>A primary goal of the Directive is “to minimize the disposal of WEEE as unsorted municipal waste and to achieve a high level of separate collection of WEEE.” To this end, by August 13, 2005, Member States were to ensure that there are systems in place, financed by producers, to separately collect waste electrical and electronic equipment from end users. By December 31, 2006, this equipment must be separately collected from private households at an average rate of at least 4 kg (8.8 lbs) per person per year. The EU will set a new target by December 31, 2008. Convenient collection points must be set up where municipalities can deposit waste equipment collected from households or consumers can return their waste equipment free.</p>
WEEE Management Systems	<p>Management systems may be organized by producers on an individual or collective basis. The Directive sets separate targets for reuse/recycling and recovery (which includes waste-to-energy recovery), based on amounts collected by weight. Producers must give priority to reuse, and targets must be achieved by December 31, 2006 although extensions have been offered to several Member States.</p>

	<p>Member States must ensure that records are kept on the amounts of materials entering and leaving treatment, recycling, and recovery facilities. The best available treatment, recycling, and recovery techniques must be used. Member States must also ensure that treatment facilities obtain all relevant permits from the appropriate authorities. Any exports of waste electrical and electronic equipment for treatment must comply with EU and OECD (Organisation for Economic Cooperation and Development) regulations on the export of waste. Exported equipment will not count toward recovery and reuse/recycling targets unless the exporter can prove that the waste treatment methods used meet the requirements of the Directive. The Directive also specifies many substances and components that must be removed from all separately collected waste electrical and electronic equipment.</p>
Financing	<p>Producers are responsible for the costs of picking up waste electrical and electronic equipment from collection facilities and for refurbishing waste products for reuse or for recycling and recovery. For “historical” products” (i.e., those put on the market before August 13, 2005), the costs of waste management are to be shared by all producers in existence at the time those costs are incurred. These producers may impose a separate “visible fee” (one that is explicitly designated, perhaps on the price tag) to cover these costs for eight years (ten years for large household appliances). End users other than households may be made partly or totally responsible for financing the management of historical products. For new products (i.e., those put on the market after August 13, 2005), producers have “individual responsibility.” That is, they must pay the cost of managing their own products. They can do this through programs set up by individual companies or through participation in collective schemes. No visible fees are permitted to fund the management of waste from new electrical and electronic products. When producers put a new product on the market, they must provide a financial “guarantee” that waste management of the product will be paid for. Producers can make good on this guarantee by participating in a producer responsibility organization (PRO), paying recycling insurance, or setting up a special bank account for this purpose.</p>
Labelling and Product Information	<p>Every “new” product must bear a label that verifies that it was put on the market after August 13, 2005, verifies that it will be separately collected, and bears the name of the producer according to an EU standard. Producers must provide information to consumers on the collection systems available and on the environmental and health impacts of hazardous substances contained in waste electrical and electronic products. Producers must also provide information to facilitate the environmentally sound reuse, recycling, and treatment of waste electrical and electronic products. Such information includes the identity of components and materials and the location of dangerous substances inside a product.</p>

Outline of the WEEE Directive

Reporting and Enforcement	Member States must establish a register of producers and collect annual information on the amounts of electrical and electronic equipment that are put on the market, collected, reused, recycled, and recovered. They must transmit this information to the EU Commission every two years. The EU has established a standard format for this reporting. The first set of information will cover the years 2005 and 2006. Member States must establish inspection and monitoring systems and impose effective penalties for lack of compliance.

The following table outlines the recovery and recycling targets to be met by EU Member States (excluding those who have received derogation)

December 31, 2006, Targets for Recovery and Reuse/Recycling, by weight

Product Category	Recovery Target	Recycling Target
Large household appliances	80%	75%
Small household appliances	70%	50%
Information and telecoms	75%	65%
Consumer equipment	75%	65%
Lighting	70%	50%
Tools	70%	50%
Toys, Leisure, Sports	70%	50%
Medical equipment	NA*	NA*
Monitoring instruments	70%	50%
Dispensers	80%	75%

* Target to be set by December 31, 2008.

2 WEEE Directive – Current State of Implementation

2.1 State of Directive Transposition and Implementation in EU 25

The transposition of the WEEE Directive refers to two elements

[1] Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment, as amended by Directive 2003/108/EC

[2] Directive 2003/108/EC of the European Parliament and of the Council of 8 December 2003 amending Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)

The transposition of the WEEE Directive was due before 13 August 2004. However, several countries have been late with the transposition of the Directive and many of the countries that did create a timely transposition did so by simply translating the EU Directive, without specifying how the legislation would be applied in practice. Further secondary regulations and clarifications are thus needed.

The interaction and overlap with other areas of legislation, e.g. hazardous waste regulations, trans-frontier shipment regulations, health and safety related marking etc., may have delayed the process of transposition and development of national legislation.

Under the terms of the accession negotiations, candidate countries are obliged to transpose the environmental acquis (Community law) into national law by the date of accession. However, in the case of very recent EU legislation that entails significant investments and/or infrastructure upgrades, acceding countries are allowed to negotiate transition periods beyond the accession date.

Seven of the acceding countries asked for a temporary derogation from the collection, recovery and reuse/recycling targets in the WEEE Directive which were due to be met by the end of 2006. Council Decision 2004/312/EC of 30 March 2004 granted Slovenia a 12-month extension and the Czech Republic, Estonia, Hungary, Latvia, Lithuania and Slovakia a 24-month extension. These countries had argued that a historical recycling deficit and low population density made it hard to meet the targets within the timetable set by the Directive. The two-year extension is in line with the derogation already given to existing members Greece and Ireland, which cited similar reasons. Slovenia asked for and has received only one extra year. Cyprus, Malta and Poland did not originally ask for derogation, but following publication of the Commission's proposal for derogation for the other seven acceding countries, these three asked for similar derogations. Council Decision 2004/486/EC of 26 April 2004 granted Cyprus, Malta and Poland a two-year extension.

Overview of Directive Implementation

	Transposition	Visible Fee (Until)	Register	Registration Date	Model
Austria	12/04	Allowed (2011/13)	UBA (Environment Ministry)	30 Sept 2005	Clearing House
Belgium	12/04 (F) 3/05 (W)	Allowed (2011/13)	3 Regional Environmental Agencies	August 1 2005	Collective System
Cyprus	07/2004	NA	Ministry of Agr, Nat. Resources and Environment	NA	Collective Scheme
Czech Rep.	06/2005	Allowed (2011/13)	Department of Waste Management	Oct 13 2005	Clearing House
Denmark	05/2005	NA	Environmental Protection Agency	Oct 1 2005	Clearing House
Estonia	Expected 09/05	NA	Environment Information Centre	NA	Clearing House
Finland	09/2004	Allowed (2011/13)	Pirkanmaa Regional Environmental Centre	NA	Clearing House
France	Expected 2005	Allowed (2011/13)	Environment Agency	NA	Clearing House
Germany	03/2005	Allowed (2011/13)	Federal Environment Agency,	November 24 2005	Clearing House
Greece	04/2004	Allowed (2011/13)	Environment Ministry	Jan 2006	Clearing House
Hungary	01/2005	Allowed (2011/13)	National Environmental Inspectorate	Jan 1 2005	Collective System
Ireland	07/2005	Allowed (2011/13)	Independent Committee	July 20 2005	Collective System
Italy	Expected late 2005	Allowed (2011/13)	Local Chamber of Commerce/Environment Ministry	90 days after decree	Clearing House
Latvia	12/2004	NA	Environment Ministry will delegate	Oct 2005 (Postponed)	Clearing House
Lithuania	10/2004	NA	Ministry of Environment/EPA	-	Clearing House
Luxembourg	01/2005	Mandatory (2011/13)	Compliance Scheme	-	Collective System
Malta	Expected late 2005	NA	Malta Environment and Planning Authority	-	NA
Netherlands	07/2004	Allowed (2011/13)	Min. Housing Spatial Planning Environment	July 2004 (Ongoing)	Collective System
Poland	Expected 09/2005	Allowed (2011/13)	Chief Inspector of Environmental Protection	-	Clearing House
Portugal	09/2004	Allowed (2011/13)	Producer Associations/Compliance under license	-	Collective System
Slovakia	12/2004	Allowed (2011/13)	Ministry of Environment	June 30 2005	Clearing House
Slovenia	06/2005	Mandatory (2011)	Ministry of Environment and Spatial Planning	June 30 2005	Clearing House
Spain	02/2005	Mandatory (2011)	Autonomous Region and National Register	-	Clearing House
Sweden	04/2005	Mandatory (2011)	Environmental Protection Agency	Early 2006	Collective System
UK	Expected early 2006	Allowed (2011/13)	DTI	January 2006	Clearing House

	Compliance Schemes
Austria	UFH-Umweltforum Haushalt, ERA, ERP
Belgium	Recupel
Cyprus	Chamber of Commerce – Under development
Czech Rep.	Envidom (1,2,10), REMA (3,4,6), RETELA (3,4,6,8,9)
Denmark	EPA El Retr
Estonia	EES Ringlus
Finland	SERTY, Elker Oy, SELT (Medical), FLIP ry (Lamps), ICT
France	Eco-systemes (1,4), ERP (ex 5), Syndicat de l'éclairage (ex.5)
Germany	EcologyNet Europe (ex 5), ERP (ex 5), ProReturn (3,4),
Greece	Recycling of Appliances S.A
Hungary	ELECTROCORD (White Goods, lighting), ElektroWaste (IT), Okhomat
Ireland	WEEE Ireland, ERP
Italy	ANIE, (Ecodom, Ecolight, Ecolamp) ecoR'it (IT)
Latvia	LZE (IT), CECED (Household)
Lithuania	INFOBALT (ICT, Consumer), CECED (Household), LT
Luxembourg	ECOTREL
Malta	NA
Netherlands	NVMP (Household), ICT (IT), Stickting Lightrec (Lighting)
Poland	CECED, KIGEiT, Philips discussing forming single organisation
Portugal	Amb3E
Slovakia	Ekolamp (5), Envidom (1,2), SEWA (3,4)
Slovenia	European Lamp Federation Take Back.
Spain	Ecofimatica, Ecolec, Ecotic, Sig Lamparas, Tragamovil
Sweden	El Kretsen
UK	Valpak, REPIC,

3 Legislation and Transposition

3.1 Key Issues in Transposition:

Existence of previous legislation in Member States

In understanding the process of implementing the Directive, it is important to differentiate between those countries who had existing legislation and take back structures (who were influential in shaping the Directive), and those countries without a WEEE culture who face implementation from a 'standing start'.

In those countries where existing legislation is in place regarding WEEE collection and recycling, changes have been required to existing legislation, primarily to add individual producer responsibility, labelling, financial guarantees, and recycling and collection targets. In most of these countries (Netherlands, Belgium, Sweden) changes though have not been substantial and are regarded as being complementary. The exception is Denmark, where the municipal-responsibility based system is being substantially changed and the process of transposition has proved more difficult, although the local producers had been working for several years on the development of a Producer Responsibility Organisation in expectation of the Directive coming into force.

Countries that have approached the Directive with no background of WEEE management have faced significantly greater problems in developing the required legal and operational infrastructure to meet the deadlines set out in the Directive. Many of the larger countries have attempted to develop more market based approaches with multiple providers of take back services and a clearing house system, differing significantly from the established collective WEEE models. The clearing house approach is not yet tested in Europe. Other smaller countries have tried to maintain a collective, single compliance scheme model.

Role of producers

Producers have sought to play an active role in the development and transposition of WEEE legislation, both through their industry associations and directly in discussions with Member State governments. Producers have been more active in those countries with little track record in WEEE management where there is the greatest opportunity to influence legislative and systemic development. Where there is existing legislation and a strong WEEE management system in place (usually a collective system), producers have tended to accept the incumbent system as the best way forward, such as in the Netherlands or Belgium, and focused their efforts elsewhere.

In some Member States industry assumed the responsibility for designing proposals reflecting the 'producer responsibility' even before the legal framework was in place, but in many cases these proposals did not materialise.

Consultation with Producers and other Stakeholders

All countries undertook some form of consultation process in the development of their legislation and compliance models. The process of legislation development has been hampered by the range of contradictory producer views on how the Directive should be implemented. According to many national authorities, obtaining agreement amongst

Legislation and Transposition

producers as to the desired legislation has been extremely difficult. All countries have faced a struggle between those pushing for national compliance organisations, and those pushing for a more market based approach, incorporating a clearing-house model. Where countries have a strong Chamber of Commerce and tradition of centralised and collaborative decision making, producers have tended to resolve these issues amongst themselves and present a united negotiating position to government.

National authorities and producers identified a lack of data to gain a clear understanding of the consequences of different approaches. Producers often felt that they were being asked to make quick decisions based upon a lack of practice and data with which to judge options. Whilst organisations such as the WEEE forum are developing good benchmarking practices, these tend to focus on a certain collective model of compliance. Data on operations of clearing house structures are less available and tested.

Producers indicated that the sharing of sales data with competitors has proved controversial and safeguards on the use and access to this data have to be put in place.

Legislative Approaches in Member States

Countries have adopted different approaches to the process of transposition. Recognising the tight timelines and significant workload involved, some Member States, such as Austria, broke the Directive into its component parts, and implemented it in stages, using a number of different ordinances.

Many of the countries who did create a timely transposition by translating the EU Directive, relying on further secondary regulations and clarifications to outline the operational, financial and reporting structures to be used. This was particularly the case in new Member States. For example, the amendment to the Waste Act in January 2005 in the Czech Republic transposed the general requirements of the Directives only. Two further pieces of secondary legislation (Ministerial Decrees) were prepared in the case of the WEEE Directive: the first to regulate the administrative details of the system (i.e. definitions, obligations etc.) and the second to regulate the relevant financial issues.

Countries without previous experience in the regulation of WEEE faced difficulties in making informed choices on the preferred structures relating to registration, financing and reporting. While each country has developed a unique solution to the Directive, the implications of these choices are not yet clear for many and the impacts are only expected to emerge once legislation and compliance schemes come into force operationally and have been running for 2-3 years.

Some countries have devoted time and effort in trying to coordinate legislation, like for instance Germany and Austria, but the attempts to harmonise their systems and laws failed.

Implementation of legislation

The level of transposition of the Directive through primary legislation is not a reliable guide to the preparedness of Member States. Many who have complied through their Primary Legislation still require significant secondary legislation and lack effective compliance structures. Some of the countries identified by the European Commission as in breach of the Directive may be delayed as they wish to finalise the compliance structures and fully develop the secondary legislation before implementing the primary legislation.

In implementing the Directive the creation of effective secondary legislation has been slowed by a perceived lack of clarity in some Member States over certain aspects of the Directive, including the definition of Producer, Product Scope and Labelling Requirements.

Timing

Consultation at national level for the development of the WEEE Directive has been very extensive in all countries. Retailers, municipalities, producers, distributors and recyclers have been involved in the process that has been often longer than initially foreseen. Timing, according to some stakeholders, has been a challenge that has contributed to the delay observed in the transposition of the Directive, despite the fact that the Directive had been under discussion for several years before being approved.

Overlap with other legislative processes

Several legislators indicated that the interaction and overlap with other areas of legislation had delayed the process of transposition and development of national legislation. Time has been required to understand the interaction with other national laws and EC Directives, including Hazardous waste regulations and the ROHS Directive

- Trans-frontier Shipment regulations

- Permitting

- Duty of Care requirements applicable to non-household WEEE

- Planning permission for collection and treatment sites etc.

- Health & Safety related marking issues

Cross-border issues

Countries with significant cross border trade and imports were concerned by the potential impact of a multi-speed implementation approach. For example, in Austria, where the ordinances started on time on 13 August 2005 and where imports already represent a sizeable proportion of total sales, concerns were expressed that implementing the Directive ahead of many neighbouring countries could lead to increased internet buying of cheaper products from other countries. Likewise, concerns were expressed in Ireland over the late transposition in the UK, and in Luxembourg over late implementation in France and Germany. This has created a tendency to resist first-mover disadvantage, and to wait until the last minute to transpose legislation.

3.2 Roles and Responsibilities

Finding an agreement on the financial and operational roles and responsibilities of actors in the WEEE supply chain has been particularly difficult. While it is clear that producers have a responsibility for collection and treatment of WEEE, it has been more difficult to decide at which point those who manage the channels for the return of WEEE (municipalities and retailers) have financial and operational responsibility. For example in Austria, local authorities collect the WEEE and demand a payment from industry for this activity. Agreements have been reached whereby the producer pays for

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the infrastructure and the roofing that needs to go over containers (infrastructure), and the local authorities pay for the manpower, electricity etc. (running costs). Likewise, initial enthusiasm amongst producers for 1:1 take back disappeared during the consultation process once the logistical and cost implications became clear. Such examples of protracted discussion and changes of heart have been repeated elsewhere across the EU. For example Poland is struggling to resolve the issue of financial responsibility for local collection facilities. Producers regard these activities as a municipal responsibility, and are refusing to provide additional resources or infrastructure.

Concerns were raised by stakeholders, which are struggling to identify who is responsible for developing and framing the legislation and systems in individual countries. Respondents felt that more detail and clarity was required on the roles and responsibilities between industry, the Member State governments, and the European Commission. During the review seminar, the following emerged as examples that demonstrated the potential conflicts and confusion between stakeholders.

Responsibility for Achieving the 4 kg Target: Although the Directive is clear on this questions, at the review seminar, there was much discussion as to who was responsible for enforcing the 4kg per capita collection target. Member States indicated that it was a producer responsibility whilst industry stated that it was clearly the responsibility of Member State governments under the Directive.

Responsibility for Product Scope and Categorisation: The identification of products covered by the Directive is responsibility of the Member States. The Commission's advice, whilst available, is non-binding. In many occasions Member States have often postponed decisions at a national level until guidance is received from the Commission, which has slowed down the implementation activity.

Responsibility for Defining 'Put on the Market': Much concern was raised over the difficulty of identifying the producer who 'puts goods on the market', especially where intra-EU trade is involved. There is general a concern that it would be difficult to track goods and producers moved between Member States, allowing for an abdication of responsibility. At the same time, it was clear that intra-EU trade operates within a harmonised VAT and Customs system, which allows the effective tracking of goods, and this was identified as a possible solution.

4 WEEE Activity in non-EU countries

4.1 Introduction

As part of the study, the consultants have examined legislative developments in 5 non-European markets where issues of WEEE take back and producer responsibility are being explored. Australia, Canada, China, Japan, and the United States.

4.2 Australia

Legislative Situation

Activity in Australia remains voluntary. The main electrical and electronic industry associations - Australian Electrical and Electronic Manufacturers Association (AEEMA), Consumer Electronic Suppliers Association (CESA), Australian Information Industry Association (AIIA) - are developing voluntary product stewardship initiatives. The Australian, State and Territory Governments are working with industry through the Environment Protection and Heritage Council's Waste Working Group. The current priorities are to develop product stewardship schemes for televisions and computers, primarily because of the CRT which contains large quantities of lead. Once schemes have been developed for these products, these may serve as models for a broader range of products. The Department of the Environment and Heritage, in consultation with industry, States and Territories has funded several consultancies exploring related issues in greater detail. The main projects are the Major Appliances Materials Project, The Computer and Peripherals Materials Project and the Electrical and Electronic Products Infrastructure Facilitation. The DEH focuses on product stewardship, which deals with a product throughout its life cycle, and notes on its website developments in WEEE management in the EU, Canada, the US and Japan.

Take Back Activity

With the support of major television manufacturers, state environment ministers in Australia are considering a plan to impose an \$18.75 recycling fee (\$US) on the sale of new TVs. The collected funds would be used to develop and operate a nationwide recycling scheme. Industry members expect the fee level to drop once the recycling system has taken care of the units currently backlogged. Australia's Department of the Environment and Heritage (DEH), in consultation with industry, States and Territories has funded several projects related to WEEE management. Key players dealing with WEEE in Australia include Australian Electrical and Electronic Manufacturers Association (AEEMA), the Consumer Electronic Suppliers Association (CESA, which is a forum of the AEEMA), the Australian Mobile Telecommunications Association (AMTA, which is responsible for recycling mobile telephones) and the Australian Information Industry Association (AIIA). AEEMA has established a working group (the Electronic Supply Chain Management Forum), which is examining issues related to the WEEE Directive. There have been efforts to take back WEEE in Australia at the regional/provincial levels, such as the CESA/AEEMA project in Victoria. Recyclers are also developing WEEE activities. For instance, the Sims Group's purchase of the Dutch recycling company Mirex (which also operates in Belgium and the Netherlands) should help the company in providing guidance in Australia on plans for instituting WEEE management legislation there.

4.3 Canada

Legislative Situation:

At the national level, the Canadian Council of Ministers of the Environment (CCME) adopted landmark national stewardship principles for electronics products in June 2004. The issues covered by the twelve key principles include the following: consumer access, product mixes, the designation of the responsible parties, performance targets and recycling standards. These principles are intended to provide a framework to help develop and deliver WEEE programmes in each Canadian province and territory and also to ensure harmonisation of key elements that are necessary for balancing environmental and economic considerations. Many Canadian provinces have also begun developing their own schemes and legislation. For instance, Alberta has launched Canada's first regulated electronics recycling programme. In British Columbia, the province's Ministry of Water, Land and Air Protection has drafted an Extended Producer Responsibility regulation. In Ontario electronics are likely to be the next designed product under the WDO. The Atlantic Research Project is underway in Nova Scotia, and draft legislation is being developed. In Saskatchewan public consultations on e-waste were concluded in April 2004 and a regulation was expected introduced in mid-2005. In Quebec, Electronic Product Stewardship working groups have been established, and there is a programme implementation target of 2006.

Take back Activity:

In October 2004 Alberta started its WEEE management scheme, the first regulated electronics recycling programme in the country. The initial phase includes computer monitors, laptops and notebook computers, CPUs (including keyboards, cables, speakers), printers and televisions, and more products may be added later. Since February 1st 2005 retailers have applied a visible fee to those products. These fees range from C\$5 for laptops/electronic notebooks to C\$45 for televisions 46" or larger, although it is noted that they may drop as historical waste is processed, markets grow and stabilise and processes become more efficient. The Alberta Recycling Management Authority (ARMA) manages the scheme and collects fees from retailers, wholesalers, distributors and manufacturers. The fees are put into a special fund on which ARMA must report annually. Through the scheme over 100 collection points, drop offs and round-ups have been established in both rural and urban locations. Both products put on the market after the scheme began operating and historical waste are collected at no cost to consumers (who pay only when purchasing new products). Between September 2004 and the end of May 2005 more than 1000 tonnes of WEEE was recycled through the scheme. Albertans have noted similarities with the system introduced in the US state of California, as well as with the EU's WEEE Directive. Electronic Product Stewardship Canada (EPSC) is a not-for-profit organisation established to develop a national industry-led programme for managing WEEE in Canada. Leading multinational corporations (Apple, Brother International Corporation, Canon, Dell, Epson, Hewlett-Packard, Hitachi, IBM, Lexmark, LG Electronics, Panasonic, Sanyo, Sharp, Sony, Thomson, and Toshiba) joined together to found EPSC, which also involves industry associations, including the Information Technology Association of Canada and Electro-Federation Canada. The focus is initially on consumer televisions, computers and printers, but there are plans to expand this focus.

4.4 China

Legislative Situation:

The State Development and Reform Commission (SDRC) drafted the “Management Regulations on the Recycling of Used Household Electronic Products and Electronic Products” in 2004 and submitted them to the State Council for promulgation. Its objective was to regulate the recycling and treatment of waste and used household electrical and electronic appliances and promoting resource recycling and reuse, environmental protection and human health. The Management Regulation starts the management of products phased out after products enter the market “end-of-life”. These Regulations, because they reflect key aspects of the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE Directive) are often referred to as “China WEEE”. In 2003, then Ministry of Foreign Trade and Economic Cooperation (MOFTEC) circulated among Chinese agencies a Chinese translation of the European WEEE Directive. NDRC reportedly used the translation as a key reference document. China WEEE proposes the take-back and recycling of certain waste electrical and electronic equipment. China WEEE would initially cover the following product categories: televisions, washing machines, refrigerators, air conditioners and computers. The State Council issued China WEEE in late 2005. The Regulations focuses on household products and computer related and only covers product disposal. Household appliance producers are responsible for: adopting product design favourable to recycling and reuse, selecting non-hazardous and non-toxic materials and substances, and materials favourable to recycling and reuse, and providing major components and other information in the instruction manual. They must also undertake their own treatment of waste and used household appliances or entrust this treatment to qualified treatment enterprises and provide the provincial authorities with information on the categories, quantities, sales volumes and export volumes of the household appliances they produce. Issues of financing and producer responsibility remain poorly defined however. The growing purchasing power of the EU has contributed to China’s increased focus on laws and policies that draw from European models. Such laws and policies, Chinese leaders increasingly perceive, may facilitate Chinese companies’ entry into the European market. Additionally, such leaders often point to the potential for “advanced” foreign laws (often referred to as standards) to improve the technological level of Chinese industry. In addition, the State Environmental Protection Administration (SEPA) issued a white paper entitled “Technology Policy on Prevention and Control of Waste Electrical and Electronic Pollution in 2004 whose objective was to reduce the generation of waste electronic and electrical equipment (WEEE), increase WEEE recycling and reuse rate, minimize impact and impairment on the environment in the process of WEEE resource utilization and disposal, and promote international trade on electronic and electrical equipment (EEE).

Take Back Activity:

The recycling system in China is largely unorganised. In Beijing, there is a semi-organized collection network; however, this is not exclusively for e-waste collection. WEEE is mainly collected door to door by individuals. There are approximately 5000 such individuals collectors in Beijing. They have no business license or fixed place of business and collect all kinds of discarded electronic products. In addition, in Beijing there is a state run collection system for waste, with 1800 collection points and approximately 3600 employees. However, the e-waste collected through these points is small. The Beijing Jin Huan Industry Waste Treatment Service Station is the only registered station engaged in the disassembly and treatment of e-waste in Beijing. The station was established in 1996 and has a capacity to process 300 tonnes of industrial e-waste, mainly from the 7 large manufacturing units. In addition there are four large

disassembly centres in Beijing. After the basic sorting and dismantling, e-waste from Beijing is sent to Southeast China, mainly the provinces of Guang Dong and Zhe Jiang where the actual refining and metal recovery operations take place. As all the WEEE collected is sent to southeast China, the final disposal takes place outside Beijing. In 2004, China's State Development Reform Commission (SDRC) announced this spring that Zhejiang province and the city of Qingdao would be the first two locations in the country to set up recycling systems for scrap electronics. China's top state-owned electronics manufacturers Haier and Hisense are located in Qingdao, while Zhejiang is an affluent province that is thought to have a high diffusion of electronics. The purpose was to develop practical reference points in order to establish related regulations and industrial standards for electronics recycling. After Qingdao became the trial city, the Haier Group, China's largest household appliance producer headquartered in the city, came forward to set up a centre for recycling old and useless household electrical appliances, as a model project. But the project has not taken off. Insiders revealed that Haier was not sure it could reclaim enough old and useless household electrical appliances and computers and hence, was wavering on investing in the project. Large enterprises and volunteer environmentalists are also involved in the recycling of electrical and electronic wastes. Last year, the China Consumers' Association (CCA), Motorola Inc. and the U.S.-based Fortune Group jointly initiated a program to reclaim old and useless mobile phones with their batteries and other accessories and transport them to the decomposition centre of the Fortune Group, to be disposed of safely. In June 2004, Motorola set up 279 reclamation stations in 151 cities in China. So far, the company has reclaimed 3 tons of old and useless mobile phones and their accessories. Those materials that are salvaged will be recycled. The country is also encouraging recycling plants, which will be subsidized from the central budget. Funds raised through issuing treasury bonds may be used to set up such plants, which will enjoy long-term, tax-free treatment. Meanwhile, the country's largest electrical and electronic waste disposal plant using non-polluting processes-the Citiraya Environment Industry-is already under construction in Wuxi of Jiangsu Province, at a cost of \$65 million. When the first phase of the project is completed, it will have the capacity to dispose of 30,000 tons of electrical and electronic wastes annually. This capacity will eventually be raised to 60,000 tons per year.

4.5 Japan

Legislative Situation:

The Japanese law for household appliance recycling, enacted in 1998 and fully enforceable as of 2001, requires industry to establish a recovery and recycling system for used products. The law allows for financing through end-user fees and the collection of used products by municipalities and retailers. The law initially covered televisions, air conditioners, refrigerators, and washing machines as obligatory items, but was extended to electronic products such as personal computers and copiers on a voluntary basis. Japanese legislation tends to follow EU legislation (thereby ensuring conformity and enabling exports to Europe), but whereas the EU uses environmental legislation, Japan often uses advanced technical specifications to achieve the same objective. Manufacturers are obligated to finance the recycling of their own products. Like take-back requirements for electronics in Norway, Sweden, the Netherlands, and Belgium, the Home Appliance Recycling Law imposes an "old for new" requirement on Japanese retailers. That is, every time they sell a product, they must take back from the consumer either a similar used product or some other product that they sold in the past. The law also permits manufacturers to contract with other organisations, such as the AEHA, to provide collection services on their

behalf. In rural areas without major appliance retailers, collection is provided by local government or the AEHA.

The Home Appliance Recycling Law specifies that manufacturers have individual responsibility for their own products. It relies on fees to finance the system, a mechanism not often used by producer responsibility-oriented policies and programs in Europe, which are generally financed through front-end fees, which are viewed as more economically efficient and provide manufacturers with direct incentives to incorporate design for environment practices. The level of fees in Japan tends to be slightly higher than those in the EU. However, Japan's law does impose specific obligations on individual producers. Despite the relatively uniform fee, for each product, each company has the opportunity to set a fee that reflects its particular circumstances, such as its ability to execute competitive recycling contracts. The end-of-life fee financing system, while effective in meeting the law's recycling goals, has proven to be very expensive for individual consumers and for the system as a whole, since the law provides few incentives to pursue a more efficient model.

Example of Comparative Fees for products under Japanese and EU Models (Euro per product)

WEEE Fees (2004 Figures Euro/Euro Equivalent)	Japan End of Life Fee	Netherlands NVMP
<i>TV</i>	18-24 Euro	11 Euro
<i>Refrigerators</i>	30-38 Euro	20 Euro
<i>Washing Machines</i>	16-22 Euro	10 Euro

Following the “old for new” requirement of many European programs (such as for waste electronics), retailers have primary responsibility in Japan's system for providing collection services, relieving local government of the responsibility to establish a collection infrastructure for appliances targeted by the law. The Home Appliance Recycling Law addresses a much narrower range of products (4) than the WEEE Directive (10 categories covering multiple products) and other EPR programs in Europe for waste electronics. However, the Japanese government estimates that the four product categories targeted by the law account for 80 percent by weight of all discarded electrical and electronic equipment. Moreover, the recycling goals contained in the law are lower than those of the WEEE Directive and they do not escalate over time. However, it is expected that once the system matures, the recycling goals will be raised.

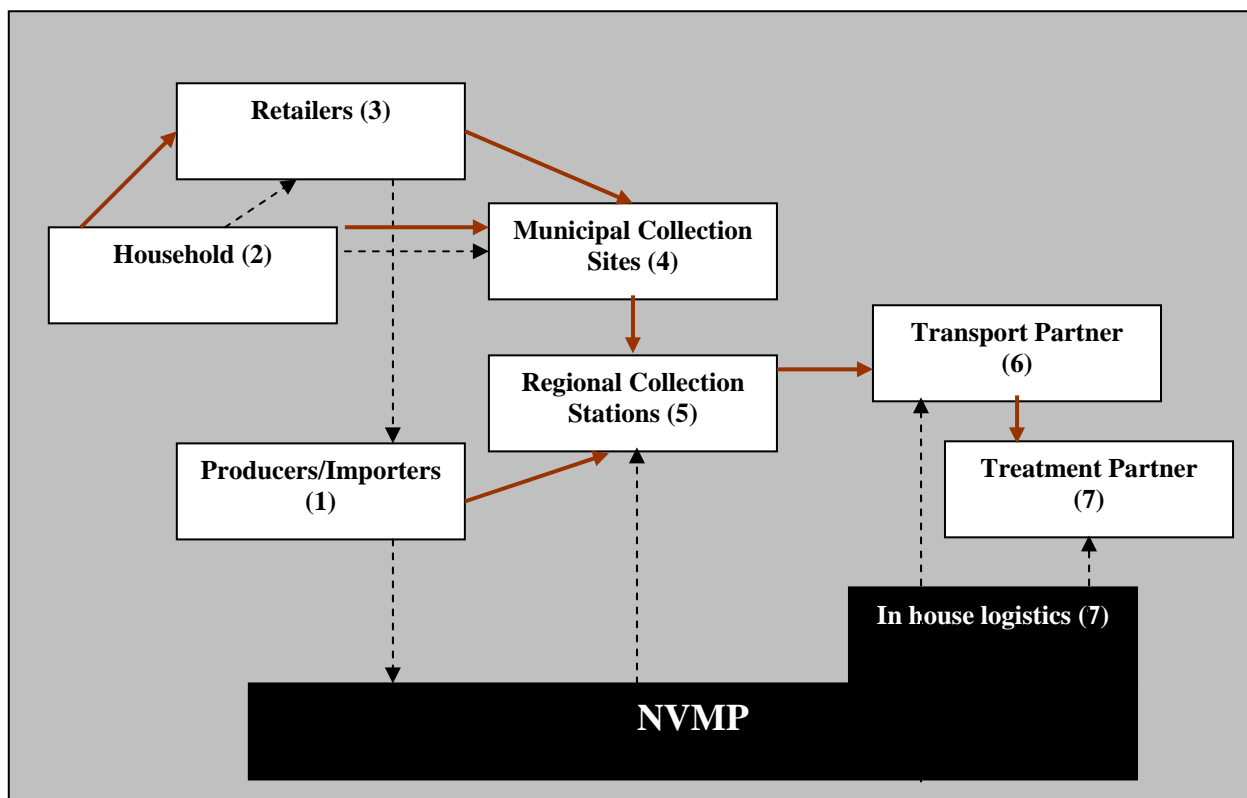
Take Back Activity:

The Association for Electric Home Appliances (AEHA), a trade group, is responsible for “orphan” products — those that outlast their manufacturer, such as a TV discarded 20 years after the date of sale. The Ministry of the Environment estimates that 80 percent of recycled appliances are currently being collected through retail outlets. Following collection, retailers, local government, or some other designated organization is obligated to transport the collected materials to consolidation centres operated by two manufacturer consortia. Each set up a collective compliance system, in order to encourage innovation, competition between the two and ensure cost efficiency for consumers. The first of these groupings included Electrolux, GE, Matsushita and Toshiba. The second was comprised of Daewoo, Sony, Sanyo Hitachi and Sharp. Each consortium set up a network of approximately 200 collection centres and 12 recycling centres across Japan. Companies that sell only a limited number of products in the

WEEE Activity in non – EU countries

Japanese market can designate other organizations to fulfil their collection and recycling responsibilities on their behalf. The few collection systems provided by local governments charge higher fees than those charged by retailers.

Model of Netherlands NVMP – A Collective EU Collective Compliance System



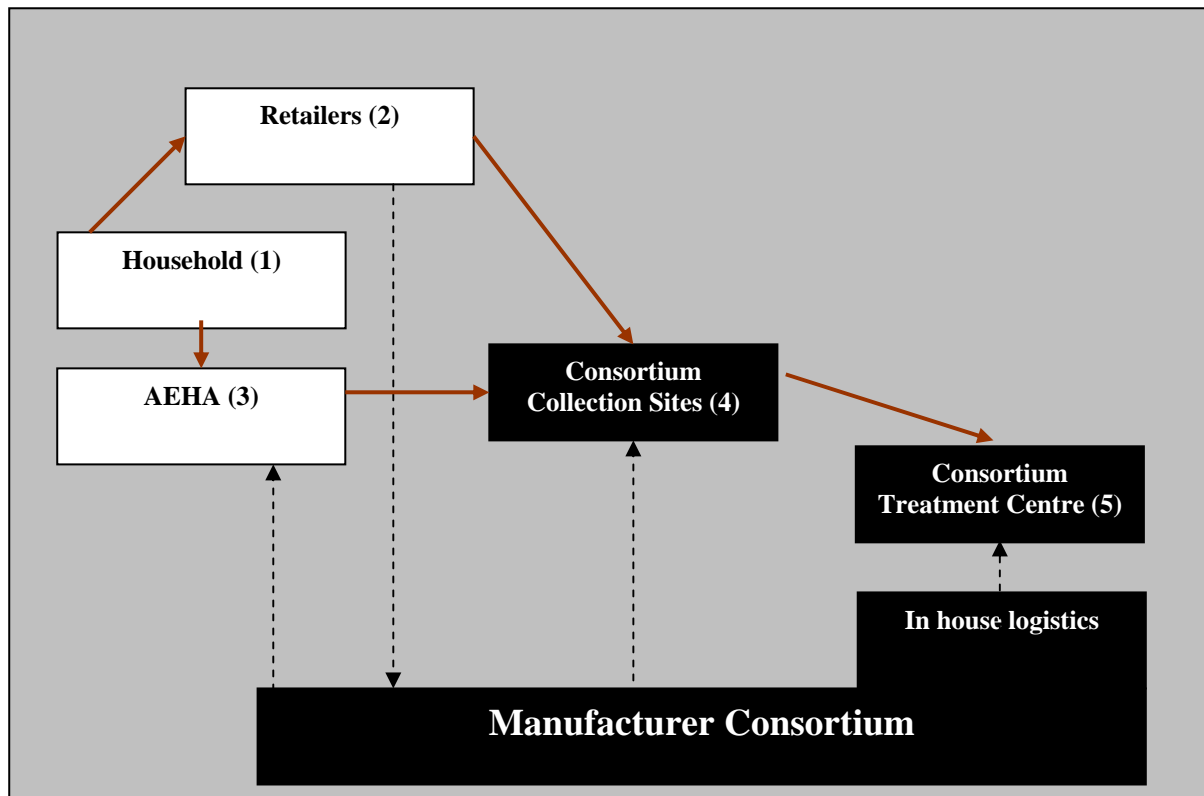
-----> Financial Flow —————> WEEE Flow

Product and Finance Flow

1. Producers Importers pay NVMP to manage their WEEE responsibilities under Dutch Legislation. A fixed fee is paid to NVMP for each product placed on the market. This fee is passed on to the consumer with no mark up. The scheme covers household WEEE.
2. Households pay a visible fee on the purchase of new EE products. Households pay a local municipal waste tax to fund general waste collection and operation of municipal sites. Households may return WEEE free of charge to municipal collection sites. Municipalities provide some kerbside collection. Households may also return WEEE to a retailer/distributor free of charge on the basis of 1:1 new for old purchase. Retailers may charge for collection of the old product from household
3. Retailers are obliged to take back WEEE on a new for old basis from consumers. They may then transfer the WEEE to a municipal waste site, direct to the Regional sorting stations or pay for collection by NVMP
4. Municipal collection sites receive WEEE and take responsibility for delivery to regional sorting stations operated by the municipalities and NVMP. Municipalities are not reimbursed.
5. c. 65 regional sorting stations receive WEEE free of charge and sort for collection and treatment. NVMP makes a financial contribution to the operation of RTS.
6. Transport contractors are responsible for the collection of WEEE from the RTS and delivery to treatment plants and recycling firms. Contractor invoices on the basis of weight. Logistics are organised in house by NVMP
7. 4 treatment and recycling contractors take receipt of WEEE and process. Contractors invoice NVMP on the basis of actual treatment costs

WEEE Activity in non – EU countries

Japanese WEEE Takeback System – A Consumer/Retailer based system



-----> Financial Flow —————> WEEE Flow

Product and Finance Flow

1. Consumers pay an end of life fee for product disposal and treatment as opposed to the producer responsibility concept in the WEEE Directive. These fees are generally higher than those found in European markets. This fee is paid to the retailer, and passed on to one of two industry consortia who are responsible for the collective management of WEEE in the specified categories.
2. Retailers are obliged to take back goods on a new for old basis. This applies both to replacement products, but also to products from non-identical product categories. It is estimated that 80% of waste is currently collected through the retail stream.
3. The Association for Electric Home Appliances is a trade group responsible for orphan products. Some collection services are also subcontracted to AEHA, who operate in isolated or rural areas not served by retailers.
4. Each Industry Consortium manages approximately 200 consolidation and bulking centres across Japan. These are privately owned and managed, although retailers, local government or another designated organisation is obliged to deliver goods from the retailer.
5. Each consortium operates approximately 12 treatment centres for different project types and groups. Transport from the consolidation to treatment centres is outsourced.

4.6 United States

Legislative Situation:

WEEE management varies from state to state within the USA. US states with a particular interest in WEEE (due to high tech industries being based there) include California, Florida, New York, Oregon, Texas, Virginia and Washington, but other states (e.g. Maine) have also taken steps to establish WEEE management programmes. In 2003 26 US states proposed 52 electronic waste bills and 10 mercury-related restriction bills that affect electronics, while 38 states had some sort of WEEE management programme and cathode ray tubes (CRTs) were prohibited from landfill sites in California, Maine, Massachusetts and Minnesota. There are also regional initiatives, such as the NorthEast Recycling Council (NERC, in which ten northeastern US states have cooperated), NorthEast Waste Management Officials Association and the Northwest Product Stewardship Council. These bodies work at a regional level to develop legislative policy with states and local communities. At the national level the Environmental Protection Agency (EPA) is active in shaping WEEE management. Under its Resource Conservation Challenge (RCC), the EPA work with retailers and manufacturers of electronic products, as well as with government agencies, to reduce the environmental impacts of the production, use and disposal of electronic products. Goals include increasing the national recycling rate to 35%. The EPA's general focus is on the concept of product stewardship, with all who manufacture, distribute, use and dispose of products sharing responsibility for decreasing the environmental impact of the products throughout their lifecycle. One effort under the RCC is the Plug-In to eCycling Campaign, which was launched in January 2003. It aims to distribute information about electronics reuse and recycling (particularly for computers, mobile telephones and televisions) and to create momentum for further reuse and recycling programmes.

Take Back Activity:

Key players in industry that are engaged in WEEE management include the National Electrical Manufacturers Association (NEMA) and the US trade association representing electroindustry manufacturers. US-based multinational companies have also become involved in WEEE management both in the US and globally. Particularly active companies include Apple, AT&T, HP, IBM and Motorola. A wide range of federal projects has been established to address particular aspects of the problem. Many of these are mirrored by regulatory approaches and associated programmes in a number of US states. One of the main issues facing the US is the challenge of establishing effective governance structures to deal with the waste electronics issue. The political structure of the US makes it difficult to develop national scale programmes, since the power invested in state legislatures enables states to make decisions and implement policies that relate to their own political, economic and environmental agendas. There have been, however, some significant regulatory developments and multi stakeholder dialogues in the US. There are a number of regional initiatives, such as the NorthEast Recycling Council, NorthEast Waste Management Officials Association and the Northwest Product Stewardship Council. These bodies work at regional level to develop legislative policy with states and local communities. Examples of active WEEE programmes at state level include The Minnesota Office of Environmental Assistance. (MOEA) developed a state product stewardship policy that is being

WEEE Activity in non – EU countries

implementing through voluntary partnerships with businesses and government agencies. An electronics task force focusing on CRTs will make recommendations for recovery and recycling goals in the state, identify alternative (non-governmental) financing mechanisms, and obtain commitments for managing End of Life (EOL) electronics from manufacturers, sellers, and product users. The State also teamed up with Sony Electronics, Waste Management Inc., the American Plastics Council and Panasonic/Matsushita Electric to test the economic viability of various collection and processing strategies for waste electronics. Sony signed a five-year agreement with Waste Management and MOEA to establish an ongoing program to recover and recycle Sony products free of charge in Minnesota. The Florida Department of Environmental Protection has developed a strategy similar to the State of Massachusetts for managing CRTs and other end-of-life electronic equipment. The four-pronged strategy aims to clarify the regulatory framework for handling CRTs, promote the development of the recycling infrastructure through grants, pursue pilot programs to evaluate various management options and execute a state recycling contract for use by Florida governmental agencies. The State is also considering a ban on CRT disposal.

4.7 Comparative Analysis

Sweden vs Japan – A Comparative Case Study

Sweden and Japan have implemented regulations and legislation that differ in many ways. The main differences are the use of retail channels in Japan as opposed to municipal collection channels in Sweden, and the use of a pre-treatment and transportation fee in Japan, with no fee in Sweden. The table below sets out some of the key components of these systems:

	Sweden	Japan
Consumers	Can return old product to retailer on purchase of similar product (new for old) Can leave WEEE at municipal collection points	Responsible for return of WEEE to retailers Pay Pre-Treatment fee and transportation fee
Retailers	Must accept WEEE under new for old rule	Obligated to accept designated WEEE from Consumers Obligated to transfer WEEE to Producer bulk collection points and can pass charge on to consumer
Producers	Must cover collection and treatment costs of WEEE Must meet environmental targets Must provide information to households	May charge consumers for pre-treatment Obligated to take back products at bulk collection points from retailers Obligated to achieve recycling target under legislation
Municipalities	Must manage collection points for household consumers	Can transfer WEEE to producer bulk collection points by paying fee. May charge consumers May treat WEEE themselves although this is not a major component of the WEEE stream

Comparative Performance

The Pre Treatment Fee: The Japanese pre-treatment fee creates an economic incentive to increase reuse and develop product lifespan. It also encourages illegal dumping of products and lower levels of WEEE collection for pre-treatment

- **Collection system:** The collection system using municipal authority parks has enabled higher collection rates in Sweden than in Japan, where a retailer led system and narrower product categories have proved less able to deliver collection volumes. In 2004, collection volumes were c.4kg for the products obligated under the Japanese system
- **Recycling targets:** The early adoption of mandatory recycling targets in Japan has encouraged higher recycling and recovery rates in Japan than in Sweden, although these are improving with the introduction of targets under the WEEE Directive

WEEE Activity in non – EU countries

The EU has the most advanced legislative and operational base for WEEE management, from all quantitative and qualitative perspectives. Not only do Member States collect significantly more than elsewhere, (between 8-12 kg per capita for countries with developed WEEE systems, but its recycling targets and treatment standards are also significantly more stringent.

The exact nature of national WEEE legislation, in terms of elements such as the scope of products covered and the range of instruments used, varies from country to country. For example, the political culture in some countries or regions might mean that extensive market intervention is regarded as a viable and desirable policy alternative whereas legislation in other areas might be more heavily influenced by a value system that promotes deregulation. The EU, China, and to a lesser extent Japan might be characterised by the former, while Australia, Canada and the US prefer to develop initiatives at a state or regional level, on a voluntary basis where possible, and to avoid legislative solutions, considered to have a lower impact upon economic competitiveness.

5 Perceived Strengths and Weaknesses of the Directive

5.1 Strengths

Most of the respondent supported the general aims and objectives of the Directive as described earlier and most felt its targets for recycling and recovery were fair.

Achievable Targets

National authorities on the whole believe that the percentage targets are “good”; “they are high and will require work, although there is inevitably an element of compromise between the most and least advanced countries in target setting. The Directive’s overall aim is good and achievable. The majority of implementing authorities find the targets (quantity and recovery) achievable, and generally consider the national recycling capacity sufficient, although there are concerns with ongoing capital investment programmes.

Visible Fee

Industry supports in general the option to indicate to consumers the costs of recycling historical waste for a period of 8 to 10 years (depending on the size of the appliance) in the form of a “visible fee”, i.e. a separate part of the product price, an instrument that has proven to be effective in two Member States and several respondents felt the final deadline should be extended indefinitely.

Own Waste Responsibility

The new rules make clear that producers are responsible only for the waste from their own products (put on the market after 13 August 2005), not the waste from others, which should lead to a move away from collective systems set up to deal with historic waste as pre-2005 WEEE becomes a smaller part of total collected WEEE.

Choice of Compliance Options

The theoretical option for a producer to fulfil this obligation either individually or by joining a collective scheme was seen as a plus by producers, but in practice, Individual Producer Responsibility remains impractical in many countries.

Financial Guarantee

The Directive requires that each producer gives a financial guarantee for recycling when placing a product on the market. Member States need to ensure that such guarantees are provided by all producers. This is essential to avoid that the remaining producers have to finance the recycling of products from “free-riders” who have disappeared or cannot be identified.

5.2 Weaknesses

The majority of producers saw few commercial opportunities in the implementation of the Directive, only ‘a burden and a challenge, nothing positive’.

Targets

Whilst most were happy with the targets set, for many they were a compromise. They are not challenging for countries that have established schemes, and do not provide any stretch, whereas other countries without WEEE saturation may struggle to comply without importing WEEE. Some respondents in countries with a strong recycling culture felt it was more important to ‘take back 100% of that which comes out’, rather than a nominal amount. In other countries, where there is a strong culture of reuse, such as Poland, Slovakia, Malta and Greece, some expressed the view that the 4kg/capita target cannot be met with domestic WEEE and producers will have to import waste in order to fulfil their obligation. In Eastern Europe, some countries have not “absorbed” this quantity of EEE yet and that the life-cycle of products is generally longer, especially of household appliances and ICT equipment, because the owners of EEE, instead of discarding the unnecessary devices gives them to others, e.g. Families, ICT to schools. Others indicated their concerns that it can be more difficult to reach the targets for some products than for others”; some targets (e.g. for fluorescent lamps) can be easily exceeded, while others (e.g. for those containing a large amount of plastic) can be hard to meet. The compliance scheme in Austria, for example expressed concerns recycling/recovery targets for categories 1 & 10 as being ‘very ambitious’, but depend greatly on the definitions of what is meant by recycling and which kinds of treatment are classed as recycling.

Definitions

A number of issues were raised in relation to definitions within the Directive that were felt by legislators, compliance schemes and producers. These include:

Definition of Producer:

The WEEE Directive sets clear responsibilities for those placing electrical and electronic equipment on the market. However, companies are unsure as to who is “the producer”. The Directive states that a producer is basically a party who manufacturers, resells, exports or imports EEE into a Member States. In the process of transposing the Directive, some Member States have adopted this concept in their national laws. Once a product is placed on the European market it must circulate freely between Member States. This might lead to certain confusions in practices: a) one product may end up with several “producers”, depending on the number of Member States it has been through before it reached the final consumer; b) all “producers” of that one product could be required to make financial provisions for it, without being able to write them off when they ceased to be considered responsible for it; and c) products may have to be re-marked as they move from one member state to another.

Product Scope:

There is concern among industry that some Member States may choose to adopt the widest scope possible for the WEEE Directive and not limit themselves to those products which are part of the categories listed in Annex I A, and find themselves listed, or are reasonably close to those listed in Annex I B. Deviating from the scope set out in the EU Directive would lead to situations where the smallest electronic components in some business equipment could be considered as falling under the WEEE Directive. This might create a difficult situation for both business and government. The product

categories are not exhaustive and products not specifically mentioned within these categories may still fall within the scope of the Directive. In the event of uncertainty, coverage will ultimately be decided by the EU Court of Justice. However, in the absence of a definitive ruling, interpretation of the scope of the Directives could be determined on a case-by-case basis by individual EU Member States in a manner that may or not be consistent throughout the EU. This could create confusion and leave it unclear about whether a given product is within the scope unless the position is challenged. Many countries are currently examining possible "grey area" products and developing guidance to assist companies in deciding whether their products are covered by the regulations. Producers indicate several areas of confusion in definitions used in the Directive. Examples include unclear definitions of 'put on the market', 'producer', 'household product'. Several respondents asked for a robust process for defining products that is not open to interpretation.

Scope for National Interpretation

Many respondents felt that because the Directive was not developed under Article 95 of European Treaty, but rather under the consequences of Art. 175 the (potential) differences in implementation from one market to the other resulted in complexity for industry. Member States can go beyond the EU WEEE Directive text and enforce more stringent requirements. This may lead to different interpretations and implementations and it may result in a heavy administrative burden to producers (producer definition and national registration processes are key examples), which will impact costs. The lack of a coordination/allocation body between compliance schemes despite the best efforts of the WEEE Forum, which undertakes its activities on a voluntary basis, is also felt with concern. If countries require very different reporting schemes companies will face more difficulties in operating at EU level.

6 Market Impact of Directive

Most respondents, from the compliance schemes and producers recognised that the Directive would have a significant impact upon their operations and markets, but regarded the current moment as too early to make a judgement.

6.1 Waste Logistics as Competitive Advantage

The responsibilities imposed by the Directive are seen as encouraging producers to optimise their internal logistics and recycling systems to minimise costs and create value. It would also help integrate the concept of waste and eco design into business routines. Some large producers indicated that although the Directive poses challenges for large producers, its impact and costs are disproportionately larger for small and medium sized companies, where resources are scarcer. The ability to gain competitive advantage is, however, restrained by the domination of collective compliance structures across the EU 25, over whose costs producers regard as difficult to manage or influence.

6.2 Reuse

There are concerns that there are significant grey areas in waste electrical equipment exports for reuse, particularly in the IT sector. For example, it is estimated that 133,000 tonnes of computer and telecommunications equipment was exported from the UK for re-use or recycling in 2003. Of this, about 23,000 tonnes was "grey market" equipment being exported without the full necessary documentation. Despite new EU shipment rules banning the export of hazardous materials in waste electrical equipment to non-OECD countries from January 2002, it has been estimated that a small number of exporters have transferred over 2 million old computer monitors and one million old TVs out of the EU for reuse. This equipment has rarely been tested or repaired before export to countries where it is suspected that dismantling takes place in unsafe conditions, or simply dumped. It might be useful to develop criteria for the reuse of IT appliances (e.g. testing, minimal capacity etc.). There is such an initiative under the Basel Convention program on environmental sound e-waste management for South-east Asia and the Pacific regions. Very little consumer-based electronic waste has true reuse value, and claims of export for reuse should be scrutinised carefully. All respondents indicated their support for the development of strict guidelines by which WEEE is processed with environmental, health and safety considerations. A couple highlighted the example of Canada where it is prohibited to export waste to non-OECD nations.

For high value communication electronics, the development of strategies for the re-use/re-marketing of complete equipment like mobile phones is in line with some corporate strategies, and the development of take-back systems is integral to this process. Some authorities felt that reuse, and especially export to developing markets of IT may be seen as a way of avoiding compliance costs within the EU as compliance fees may be refunded if export can be proved. By exporting these goods, the waste will be generated outside EU whereas any financing remains within the EU. The Directive doesn't currently provide a solution to this issue, but it might be imagined that in future, financial provisions would be transferred to 3rd party countries to pay for equipment placed on the market in the EU and exported for reuse/disposal.

6.3 Eco-Design

One of the main purposes of the WEEE Directive is to compel manufacturers to manufacture products that can be easily dismantled, recovered, reused and recycled and as such supports environmentally friendly product designs. Firms may have an added incentive to alter their product's design if it allows for lower product recycling costs. Implementing improved environmental design to minimise costs and increase recycling/reuse potential is regarded as a potential opportunity. The only way to insure producers are willing to invest in Eco Design is that they are able to recover the benefits of their investments. In reality, however, several key countries have simply 'dropped' the IPR concept out of their final or draft transposition, rendering the Eco-impact of the Directive less effective. In addition, the perceived lack of linkage between fee levels for individual products or categories for recycling and actual costs (as a result of cross subsidy or high administrative costs) has lead some producers to show that 'a cost-effective recycling solution is not necessarily related to environmental benefit'. Some companies also see Eco-Design as being an issue which is already being tackled outside of the Directive's scope.

6.4 Commercial Behaviour and Product Pricing Strategy

Many producers were unable to identify specific impacts of the WEEE Directive on product pricing strategy and consumer behaviour as yet and were waiting for Directive implementation in major markets before making an assessment, as WEEE remains just one cost component of much more complex supply chains. Some however, did express the negative impact that the Directive would have in their product markets citing experience from countries with established national schemes.

Visible Fee

Some respondents regarded a mandatory visible fee, i.e., where the recycling element is shown separately as providing some cushion against the impact of the Directive on price competition. Where the fee is integrated in the sales price of new products, it affects psychological price setting (e.g. 99, 199 Euro) which could influence competitive behaviour between players on the market. Possible changes of visible fee, certainly increases, will have a greater impact on psychological price setting as an increase of the fee will affect the final price. It might be the case that any increase of the fee will directly affect producer's profitability. Where the visible fee is not mandatory, it tends to disappear, leading to more pressure from dealers and retail price bargaining.

Business-to-Business take back unaffected.

Those companies operating in B2B markets do not regard the Directive as impacting upon pricing strategy as implementation of the Directive remains less developed in the B2B area, and many companies already manage their own take back systems due to the specific high-value nature of B2B used goods.

Impacts of National Collective Schemes on Product Pricing

Those producers in favour of competitive compliance models claimed their experience of what they consider national 'de facto' monopolistic compliance schemes in Belgium, NL, Sweden, Norway, Switzerland indicate that although take back and recycling

activities are generally performed well, cost remains a major issue, impacting product pricing and margins.

Competition rules

A minority of producers expressed concerns that some of the activity under the Directive might be seen as a breach of EC competition law. They pointed out in particular to the operation of the Directive on the market for systems to fulfil obligations under the Directive, the market for the collection and treatment of WEEE, and the market for recovery and sale of secondary material. In particular, producers expressed concerns over the relationship between producers and waste management companies regarding exclusivity of relationships, and restrictions on reselling of secondary material amongst other issues.

Respondents based in Germany cited, in particular, the role played by the German Cartel office in this field and the caution expressed by industry of developing collective schemes with more than 25% of the market. Those who supported national collective schemes cited the fact that provision of services and subcontracts for collection and recycling created an effective competitive market within the scheme itself.

6.5 Cross Border Trade***International Market Distortion***

Whilst most respondents indicated that it was too early to gauge the cross border impact, several producers expect different transpositions/implementations from country to country to create different financial impacts on two sides of a border, thus impacting economical balance and trade streams. Differences in legislation and WEEE operation between countries might lead to distortion of competition between neighbouring countries. This was especially true where volumes were high and the cost of compliance for a product category was a significant proportion of the retail cost e.g. lighting. This will tend to be an issue during the initial phases of transportation, although for most products, the differential in the ratio of recycling fee to price is not significant enough to impact.

Market for primary and secondary materials.

The standardisation of reprocessed materials is essential to ensure intra EU competition for recycled products. Creating a market for reprocessed material and low grade WEEE depends on the standardisation and definition of graded materials. There is inherent value in much of reprocessed products especially metals. However the bulk of WEEE (70%) is low grade plastic which has a low economic value (10% of reprocessed white good). If sorting fees and registration fees are not set to reflect this, recycling facilities will not be encouraged to trade in and to recycle low grade material. Restrictions of the marketing of secondary materials should be kept to a minimum to ensure that the market functions adequately.

Overseas SME importers into EU

Many small and medium-sized businesses are most likely unaware of the new legislation and the responsibilities it entails. This situation could lead to many SMEs to halt sales to the EU until they have complied with the new requirements.

Producer vs Distributor

According to the WEEE Directive, a firm bringing a product to the market for the first time, even if it is not the original manufacturer of the EEE, is considered a producer and has the obligation to register. As distributors have the responsibility to take back and treat WEEE, they may renegotiate their agreements to include cost sharing with overseas producers. It may even lead to some non-EU firms choosing to open a subsidiary rather than dealing with distributors. Non EU firms that already have a subsidiary in Europe are aware of the new legislation and are consequently at an advantage over the companies that sell via distributors and agents.

Administrative Complexity and Loopholes

The Directive defines producers at European level while the transposed legislation in some countries defines producers at national level. This may create problems on potential product re-marking, change of visible fee (different from country to country) and product traceability. Large companies (not distributors or retailers) may consider purchasing electronic and electrical goods for their internal use outside the EU or in markets where legislation is not ready or recycling fees lower than elsewhere, and then splitting the load once it's inside the EU. An intensive collaboration between Member States' systems with an extensive information exchange on the level of import and export is necessary in order to avoid multiple financing demands on distributors.

Lack of pan-European industry view

Some respondents saw the trans-border issue as symptomatic of the lack of interest in the practicalities of operating a multinational business. The industry was described as being 'under pressure from all sides', from bureaucrats who have not 'synchronised' their activities, and who lack a 'wide-angle view'

6.6 Producer Profitability

No respondent saw compliance with WEEE Directive as being a profitable endeavour, but many were taking a 'wait and see' approach to assess the impact. However, responses were split between those who regarded WEEE compliance as a revenue neutral matter (as costs are ultimately met by customers), and those who regard it as high cost, (i.e. some or all of the costs are met by the producer). Where there is a visible fee and costs are fully passed on to the consumer, producers often feel protected, although the accounting trail to reclaim the fee can be seen as costly. Where there is no visible fee and costs are absorbed into product price, the costs of WEEE compliance can be significant, especially in highly price sensitive and competitive low margin markets such as consumer electronics and will most likely be borne by the producer in the short term whilst the market stabilizes and issues of free-riding are addressed.

7 National Approaches

7.1 Introduction

The Directive leaves the specific design of the WEEE management schemes to the discretion of Member States, and their national experiences illustrate a range of possibilities. This is particularly true in terms of the sharing of responsibilities within the logistical organisation and the structures for financing WEEE.

Adaptation of Existing Systems

Before the entry into force of the WEEE Directive, several European countries had already adopted national regulations and organised management schemes for WEEE. These systems respond to sometimes different national situations and philosophies and are now being adapted accordingly. In some countries, such as Sweden, Netherlands and Belgium, this process has been relatively straight forward as existing legislation and structures were in line with the Directive. In others, such as Denmark, the process of transposition and the development of compliance structures has required much greater changes and is proving more contentious.

Producer vs Government Design

National WEEE Compliance models have been very much industry led, although the level of government involvement varies considerably. National authorities have developed the legislative frameworks in close consultation with industry, but have left the detail of operation compliance and scheme structure to individual companies or industry associations. Those countries where transposition is somewhat delayed tend to have a higher level of government input.

Business to Business

Most Member States have focussed primarily on household WEEE. Business WEEE is seen by many as being a non-issue, as limited volumes enter the municipal waste stream. This is due to the 'closed loop' contract nature of much B2B WEEE, whereby old equipment is removed as new is delivered. The nature of the product will determine what happens to the majority of B2B WEEE, with items that have a high precious metals content, or high reuse/resale value naturally finding their own commercial market, either through the producer or 3rd parties. The creation of obligatory B2B systems is seen by responsible authorities and producers as taking up time and resources that might better be deployed elsewhere. Member States are looking to deal with B2B issues that arise on a case-by-case basis.

7.2 National Implementation Model Drivers

Distance and Geography

Smaller distances dramatically reduce transport and logistics costs. Schemes in countries with greater distances such as Norway and Sweden have greater associated transport costs than those in Belgium and the Netherlands, where transport distances are configured at lower levels.

Population Size and Density

Countries with higher populations and urban population densities are able to generate economic efficiencies and economies of scale through the concentration of facilities and their ability to generate higher WEEE volumes relative to costs. NVMP in the Netherlands benefits from this.

Cost of Labour

Collection, treatment and sorting are highly labour intensive activities and contain a significant labour cost component. The higher labour costs in Scandinavia are reflected in their overall costs.

Type of Product

Each WEEE product type has a different cost associated with its recovery and recycling. Many schemes focus on particular product categories and exclude others according to local legislative requirements and the existence of parallel WEEE schemes. Whether the scheme negotiates with its recyclers on an overall price per kg basis or according to individual product categories, the cost per kilo will reflect the product mix.

Volume of WEEE

A system that handles greater volumes of waste will be able to obtain greater economic efficiencies through rationalising its contracts with suppliers and using its market power to negotiate better rates.

Length of time in operation

It is difficult to compare schemes that have operated for different periods of time. The longer the scheme has been established, the greater the opportunity to fine tune the system, negotiate better contracts with suppliers, rationalise overheads and invest in capacity. There are extra costs and wastage involved in establishing a new system such as publicity, poor initial budgeting and volume estimation and unforeseen capital investment that must be reflected in the overall costs of the system.

Recycling standards and treatment

Prior to the Directive, each country was responsible for setting its own standards and definitions for recycling. The level of recycling standards, quality control systems and processes varies significantly across Member States. Low supplier contract costs in certain countries may reflect lower contractor recycling standards.

Quality and standardisation of reporting data

The scope, level and sophistication of reporting data vary considerably between WEEE schemes. This is being addressed at a European level in the WEEE Executive forum. Some schemes report in terms of units collected, others do it in terms of Kg. Some schemes, such as NVMP do both according to product category. In addition, the schemes in Denmark, Sweden, lie outside the Euro-zone so historic cost data is subject to significant currency movement. Likewise, costs in the non-Euro Zone UK and new Member States will experience similar currency impacts in making comparisons.

Consumer behaviour

Established European compliance schemes owe their success to prevailing consumer recycling behaviour. The level of WEEE recycling awareness in relation to specific product groups is also a key driver of success. Even in those countries that have a strong track record in WEEE recycling, it is proving difficult to influence disposal behaviour in relation to new product categories such as small ‘bin-size’ items and items with perceived economic value such as mobile phones, where collection rates are significantly lower than in other categories.

7.3 Collective vs. Competitive System

There are two clear generic categories of national organisation, the national collective system (monopoly) and the competitive clearing house system. National legislators as well as producers have different views on the preferred system; some supports the laws of the competitive market while others see the benefits of managing risk. However, many producers who favour competitive market place for recycling schemes also participate in those collective schemes where they are well established.

National Collective System

The first approach is to create a national system responsible for collection, recycling and the financing of all (or the vast majority) of WEEE within national boundaries. This prevails in those countries that have established WEEE systems. Whilst their legal status differs by country, they are generally non-governmental, not-for-profit companies set up and owned by one or more trade associations. Denmark, which has traditionally operated a municipal run system, has moved toward a similar structure, whilst theoretically allowing other compliance systems to exist. They represent a collective response to legislative requirements in the respective countries. Even where such national schemes exist, some large retailers and supermarkets (such as IKEA) have chosen to remain outside and operate their own schemes, and there remains pressure from industry for WEEE recycling competition to ensure that the dominant scheme remains efficient. Producers who supported collective models identified the additional costs of managing a national clearing house, separate collection containers, extra logistics, etc. and pointed to economies of scale of national systems, especially in small countries where volumes could not create a viable market for multiple systems. National schemes properly managed were seen by their supporters as providing the simplest route to meeting the challenges of the WEEE Directive. These national schemes are organised into product categories to achieve maximum efficiency in their operations, recycling and identification of markets for recycled material product reuse. Collective models were seen as useful for historical waste, where there was little competitive advantage in running a competitive system.

Clearing House System

The second approach is to create a national framework in which multiple parties (producers, recyclers, and waste organisations) can provide services. This system has been the preferred option in those Member States where no pre-Directive WEEE system or legislation was in place. The government ensures that there is a register of producers and defines the allocation mechanism and reporting and monitoring system. Several

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countries have 5-6 market entrants (UK, France, Hungary, Czech Republic) with more expected although there may be some market consolidation as economies of scale come into play. Where Member States undertake a competitive approach, with multiple providers of compliance, this is done to ensure that monopolies do not develop and that costs are driven down. Whilst in theory, a monopoly of one scheme over the other schemes could happen, it is considered unlikely as legislators retain approval over the licensing of schemes and can withdraw licenses or use fines where the terms of approval are contravened or a monopoly situation arises.

Supply Chain Management:

Respondents who supported competitive models identified supply chain management as the basis of their approach and indicated that 'monopolistic' collective national systems ran contrary to this management strategy. In large organisations, supply chains are managed on the basis of competitive tender. WEEE is regarded as a new 'section' of the supply chain that should benefit from identical management skills as those used in other areas of product lifecycle management. These supply chains are already pan European or worldwide in nature.

Encouraging 'cost down' pressure

Collective WEEE compliance schemes were seen as having no continuous 'cost-down pressure', which might be found in an environment where economies of scale and competition are at play. Where collective schemes had been undertaken in other areas of environmental compliance, such as packaging and batteries, these were regarded as not having been cost effective. In Germany for example, the cost of packaging take back was reduced significantly since the introduction of market competition.

Avoiding Vested Interest

Other producers complained about the power that national collective schemes develop through the accrual of funds and board members from sectors with differing interests, even though these schemes are in theory owned by the producers themselves. There were comments that it had become 'very difficult to influence the effectiveness of such systems'. It is very difficult to serve everybody out of one model as collection & storage & handling needs differ between the products. Competitive schemes can create a better cost-efficiency by considering lean management and tailored solutions.

Evolution and consolidation

Some respondents supported the idea of a number of competitive schemes when developing a system, as this would provide early opportunity to ensure the costs of WEEE are minimised. They expected that ultimately, however, only a small number will exist as schemes combine or become non-viable: much like business is consolidating today into large organisations.

7.4 Process for Approval of Collective/Individual Producer Responsibility

Although all countries allow the concept of individual compliance and multiple collective systems in their legislation, in practice, legislators encourage certain outcomes through the creation of strict approval criteria. In practice, individual producer responsibility is discouraged, and in many cases, producers must join a single national collective system, rather than being allowed to set up a rival system to the existing dominant player. The motivations for doing so may be sensible - to ensure equity - to prevent individual producers 'cherry picking' easy to collect waste and avoiding activity in higher cost, lower population density areas, or to reduce the administrative burden for the authorities by reducing the volume of monitoring and approval procedures required. Criteria for approval are not always evident, but may include national coverage, acceptance of other producer waste as criteria, accepting waste with more than one product category, having a minimum share of market, a minimum number of producers, financial guarantees etc.

7.5 Collection Channels

There are several channels for collection of WEEE although three primary ones: municipal collection sites, in store retailer take-back, and producer take-back. The majority of schemes have organised themselves primarily around the municipal collection system. Some, such as ICT Milieu, the Danish system and El Kretsen use this channel exclusively. Others, such as Recupel, NVMP and El-Retur encourage retailer participation, but this does not exceed more than 30% of total volume. Some non EU schemes, such as SWICO achieved much higher levels of collection via the retail chain (upwards of 55%).

Retailer Take Back and Storage.

Consumers can take back WEEE to retail stores that distribute similar products. This may be dependent upon purchase of a new product, or without any purchase required, and is sometimes done at the point of home delivery and installation of a new item by the retailer/distributor. Where available, this service is usually free to private households.

Producer Take Back and Storage

WEEE is taken back directly by producers and then fed into the WEEE system. This usually applies to larger commercial equipment and operates on a 'new for old basis'.

Municipal Collection Parks

Consumers and or businesses can leave WEEE at municipal sites. A number of sorting containers and/or pallets are provided according to the product scope and logistical arrangements with recyclers and transporters. This is usually free for household WEEE, although charges sometimes apply for commercial companies.

Other Collection Points

Consumers and or Businesses can leave WEEE at specially created sites/centres. These can be specialised sorting centres controlled by the PRO or more commonly third party

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sites, whose operators may be remunerated for the provision of space. A number of sorting containers and/or pallets are provided according to the product scope and logistical arrangements with recyclers and transporters. This is usually free for household WEEE, although charges sometimes apply for commercial products.

Doorstep Collection

Household WEEE is collected from the doorstep by the PRO or by municipality. Charges may apply.

Commercial Collection

WEEE is collected on request from industrial enterprises. Charges may apply.

7.6 Logistics and Treatment Systems

All schemes outsource the majority of their transport and treatment activities to commercial suppliers, usually on the basis of 2-3 year competitively tendered contracts. The number of recycling and transport providers varies dramatically by country. El Kretsen uses a total of 33 directly contracted service providers whilst ICT Milieu uses a sole supplier. Recupel and NVMP retain an in-house logistics capability where all WEEE entering the system is logged and co-ordinated via a central control point. Recupel has invested in a limited in-house transport and collection capability. Others, such as El-Retur and ICT Milieu have out-sourced all logistical, as well as transport and recycling function. Several of the schemes, conscious of the growing concentration of power amongst recycling and transport service providers, insist on issuing separate contracts for recycling and transport/logistics. One scheme manager indicated that it would be cheaper to negotiate a single transport/recycling contract with one service provider for the entire country, but that this posed unacceptable dangers with regards to the competitive position in future tender negotiations. As a result, most use multiple recyclers and transport firms, chosen on the basis of regional and/or technical specialisation. Those schemes that use multiple recyclers and transport firms, and that have been through a process of competitive tendering, have managed to control and reduce costs substantially. Schemes such as ICT Milieu that operate through a single supplier have failed to deliver similar reductions in contract costs. Many countries allow a considerable level of autonomy for local authorities to decide the level of service that they provide to local households between the household and the municipal collection facilities. In Denmark, for example, the 'local communities' can define what level of service they provide, and whether small enterprises can also make use of municipal facilities designed for household WEEE.

7.7 Financing Models

Generally speaking, there is a difference in the preferred financial model of the ICT sector and that of the Brown and White Goods sector with regards to WEEE management. This reflects the differing preferences for dealing with historic WEEE and orphan products. Whilst White Goods firms, and to a lesser extent consumer electronics may strongly support visible fee schemes such as Recupel and NVMP, they are less supportive of arrears-based market share schemes such as ICT Milieu, the reverse being true of the likes of ICT firms, who have fewer historic liabilities. ICT

firms also tend to favour competitive compliance systems, rather than national schemes, as they perceive that costs are better managed.

It appears that Brown and White Goods producers are by and large happy with the schemes set up to address Brown and White Goods. Similarly, the IT producers appear by and large happy with those schemes set up to address IT goods. This should come as no surprise as these companies will have been involved in the initial stages of setting up these schemes. Equity conflicts arise when an IT producer, because of the ways in which products are categorised, is forced to participate in a scheme that was set up to address Brown and White goods, and vice versa.

Fee Structure

Various options are possible – actual costs of recycling, projected costs of recycling per category, cross subsidisation – the more complex the fee structure, the more demanding it is in collection and administration. NVMP and Recupel differ significantly in the number of product fees they charge. There is a trade off between accuracy and efficiency. Both El Kretsen and El-Retur have approached this issue by allowing multiple financing systems for different product categories. In the Netherlands, ICT and NVMP operate as separate PROs precisely because this flexibility of financing could not be achieved. Table 1 provides an overview of the financing mechanisms of the established individual schemes:

Table 1. *Established European WEEE Schemes (EU/EEA): Flexibility of Cost Models*

Scheme	# Models	Cost	Type of Cost Allocation
Recupel Belgium	1		<i>Fixed Fee Model</i> – All categories.
NVMP	1		<i>Fixed Fee Model</i> – Certain categories excluded
ICT	1		<i>Debiting Model</i> – <i>ICT products</i> . Real costs are calculated on a month-by-month basis and divided amongst members on a market share basis, calculated monthly.
El Retur	3		Fixed Fee Model (EE Bransjen) – According to type and volume of product placed on market (Brown Goods) ICT Model (IKT Retur/IT Retur) – Actual Costs are calculated month by month and divided amongst members on a current market share basis Fixed Fee Customs Model – White Goods (Hvitevareretur). A fee is levied by customs on import and passed to PRO Spell out what it means!
El Kretsen	3		<i>Debiting Model – Preliminary Cost</i> . A preliminary cost (per unit, per kg or % of sales value) is fixed for the year. These fees are compared against actual costs at year-end and difference settled. <i>Debiting Model – ICT products</i> . Real costs are calculated on a month-by-month basis and divided amongst members on a market share basis, calculated on the preceding year. Costs per unit will therefore vary on a month-by-month basis. <i>Other Debiting Model</i> . Special fixed fee debiting models have been developed for specific product groups – e.g. light bulbs (2500 SEK per year).
SWICO	2		<i>Fixed Fee Model: ICT Products</i> . Fixed fee tariff banded according to sales price. 12 fee bands with no fee for products under 50CHF <i>Fixed Fee Model: Consumer Electronics/Photographic</i> . Fixed tariff according to product category. 5 fee levels with no fee for price below 50 CHF

Funding for Supply Chain

There are a number of concerns raised over the funding of activities at the initial collection stage, where municipal facilities and funds are used and producers are

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required to meet some of this cost. This can lead to protracted negotiations over the fees due to municipalities. In several cases, such as Slovakia and Poland, because there is no funding mechanism nor obligation for municipalities to provide collection points and services, the Producer Responsibility Organisation (PRO) in theory is responsible for the full establishment of collection infrastructure (either at the existing municipal sites or by establishing their own infrastructure).

Financial Guarantee

In some countries producers have to provide a financial guarantee for fulfilment of their take back obligation for products placed on the national market after the effective date of the local legislation (so called “New waste”) by giving evidence of a guarantee (e.g. blocked bank account/insurance) for future WEEE costs. In most European countries an additional financial guarantee is not needed if the producer is member of a collective scheme. Where governments are keen to see producers join compliances schemes rather than comply individually, the guarantee may take into account inflation in collection and treatment costs, thereby making prohibitively expensive to undertake an individual compliance route.

8 Compliance Schemes - Performance and Impacts

8.1 Introduction

The authors of this report have attempted to outline the structure, operation and performance of established compliance schemes with particular reference to their financial and operational performance, and their impact upon industry and the competitive environment. For many stakeholders it is too early to rate the performance of compliance schemes, with many of them yet to begin operation. This was especially true in the major markets - Germany, UK, France, and Italy. To evaluate and compare real efficiency rate is too early and several respondents indicated that 2007 would be the first year in which a real EU comparison could be made. Comments were restricted to the main existing take back schemes in the EU – Belgium (Recupel), Netherlands (ICT Milieu, NVMP), and Sweden (El Kretsen). The availability and quality of information available on the individual schemes varies considerably. The analysis used in the report reflects published data and, where unavailable, the authors' best estimates based upon annual reports, accounts and interviews with scheme legislators, managers and industry representatives.

Comparing the performance of European WEEE schemes on a like-for-like basis poses considerable challenges. The authors recognise a range of 'environmental' factors that impact directly on scheme operation, including geography, population size/density, cost of labour, product scope, industry enthusiasm and organisation, disparate legal requirements and standards, and scheme maturity. Scheme performance is also largely dependent upon the prevailing national recycling culture and public willingness to engage. It would be unwise to extrapolate directly from any European compliance model to any other without being aware of the context and existing structures against which it has developed.

8.2 Defining Scheme Performance

In defining the effectiveness of the compliance systems that have been introduced, respondents identified the following indicators as being the most reliable and useful parameters of efficiency

- collection rate (kg/inhabitant)
- percentage of recycling and recovery for each family product
- recycling/recovery costs
- overall values of reserves within compliance scheme (the lower the better)
- amount of landfill/incineration volumes

8.3 Effectiveness of Schemes

Collective Schemes

Several producers regarded collective take-back systems as established in most European countries as the most effective way to fulfil the obligations resulting from the Directive and there was scepticism about countries that had prevented the development of collective systems. For Business to Consumer waste, where collection takes place mainly at a municipal level, some regard collective schemes to be the only viable solution. These approaches, typified by Netherlands, Belgium and Sweden, were seen as 'tried and tested', and offered the only approach that has to date worked in practice.

Compliance Schemes

This was particularly true for advocates of a visible fee mechanism, who supported developments in France and Spain that provided ‘proper financing for historical waste’ and help finance the launch. Within these collective schemes, there was some difference as to whether pay as you go schemes, such as ICT Milieu (NL) offered better value than schemes that had accrued reserves for historic waste (NVMP, RECUPEL). SWICO (Switzerland), whilst outside the EU, was often praised for its control of costs and solid recovery and recycling percentages.

Clearing House Model

Other producers were in favour of competitive models using a national register/clearing house, although in practice, they lacked the operational experience and data to make good analysis and comparisons with existing collective schemes. The responsibilities of a central national coordination body were seen as twofold: first, the appropriate determination of the collection obligation of each producer (via the national registry) and assignment of such obligation to the compliance scheme acting on behalf of the producer, and second, an allocation mechanism that enables compliance systems to indeed collect WEEE in an equitable manner from collection points over the territory (comparable to the role of a control tower enabling access to the runway for multiple airlines). They called for a system to calculate the take-back responsibility of the different producers, assign WEEE pick up responsibilities and supervise that all producers fulfil their obligations.

Advantages and Drawbacks

There has been an active debate for some years regarding the relative merits of collection systems vs. clearing house models. Several respondents indicated that market based systems were designed to meet the minimum levels of collection and recycling in the most cost-efficient manner, without any pressure to over achieve or exceed them. The market model therefore creates ‘financial stretch’ – compliance at least cost, without necessarily providing an incentive for additional environmental or behavioural improvement beyond that stipulated in legislation. Collective schemes on the other hand have invariably exceeded the collection and recovery targets set for them by national governments, and thus provided ‘environmental stretch’ building a stronger recycling ethos, and investing more in behavioural change amongst consumers. Experience in Member States without existing WEEE infrastructure or legislation would indicate that the clearing house is the preferred industry route where the market is large, and the potential cost savings are substantial. For this reason, major markets, such as the UK, France, Germany, Italy are adopting market based models. For smaller markets or those countries with existing schemes, the benefits of market mechanisms are not substantial enough to outweigh the greater simplicity of structure and financing of a collective model.

Business to Business

There was a general feeling that individual or groups of individual producers in a give sector were better placed to manage B2B WEEE. The ongoing commercial relationships, often supported with service agreements, and high levels of product reuse and re-export meant that very little B2B WEEE enters the municipal waste streams, and that the collection and disposal of used equipment often forms part of service agreements.

Efficiency Improvement over time

Those respondents who did monitor scheme efficiency closely, indicated that national collective schemes were reducing costs constantly, especially through optimisation of collection conditions, coherent planning of pick-up operations and best selection of service providers for logistics and treatment. It was recognised that efficiency needs time and depends on return rate, and therefore on consumer participation in take-back.

8.4 Quantitative Performance Measures*Collection*

There is wide variation in the volumes of WEEE collected and treated by the various schemes, although this is somewhat dependent upon the scope of product and population size. In terms of total volume, El Kretsen handled the largest quantity of WEEE in 2002 at approximately 75,000 tons, equating to approximately 8.4 kg per head of population. By contrast, ICT Milieu, operating in a more limited product area, collected only 9426 tons, the equivalent of 0.6 kg per capita. All of the countries currently meet the collection targets set out in the Directive of 4kg per capita. Belgium and the Netherlands currently collect in excess of 4-5 kg per capita on an annual basis. Norway and Switzerland, non-EU countries operating collective schemes similar to those in the above countries both deliver collection rates in excess of 8kg per capita.

Recycling Rates

The schemes examined all reported recycling rates between 80-90% (including energy recovery). It is extremely difficult to make comparisons of recycling and treatment performance due to varying standards and definitions between countries.

8.5 Consumer Awareness

There is wide variation in the level of investment in public relations and marketing activities between schemes, and as a consequence, in the level of consumer awareness. Visible fee schemes, such as NVMP and Recupel invest up to 4% of budget in PR activities, including television, print media and point of sale (POS) materials. They also conduct consumer research, indicating that they have achieved levels of consumer awareness of approximately 70%. Elsewhere, marketing activities are more limited and consumer awareness data is not available. Most scheme legislators and managers assessed the level of consumer awareness as 'moderate' at best. It should be noted however that those countries with high levels of consumer awareness are not those with the highest collection volumes.

Compliance Schemes

Table 2. *Figure X – Existing Schemes – Pre Directive Performance (2002)*

	Recupel	ICT Milieu	NVMP	El Kretsen	El Retur*	SWICO*
Country	Belgium	Netherlands	Netherlands	Sweden	Norway	Switzerland
Established	2001	1999	1999	2001	1999	1994
Full time staff 2002	25	2	12	12	7	4
Operated by	Producers	Producers	Producers	Producers	Producers	Producers
Quantity of WEEE Collected. Kg (2002) Kg	35,875	9,426	65,856	74,756	35,787	37,400
Quantity of WEEE Collected. Kg per capita (2002)	4.0	0.58	4.3	8.4	8.0	3.3 (8.4 including SENS)
Total cost per Kg collected including overhead/reserve fund formation in Euro (2002)	1.36	0.48	0.61	0.47	0.60	0.80
Direct recycling and transport costs per Kg in Euro (2002)	0.54	0.45	0.35	0.45	0.52	0.64
Estimated Reserve **	c. 25,000,000 Euro (e) Future Provision	n/a	c. 80 Million Euro (e) Future Provision	c. 9 Million Euro (e) 3 month operating reserve	c. 18 million Euro (e) 12 Month Operating Reserve	c. 10.5 million Euro (e) 6 month Operating reserve
Recycling Performance (including energy recovery)	80%	89%	80%	90%	84%	97%
Retailer Take Back	Yes	Yes	Yes	Limited	Yes	Yes
Collection Sites	Yes	Yes	Yes	Yes	Yes	Yes
Number of Financing Model according to product sectors	1 Fixed Fee per Unit	1 Actual Recycling Costs based upon market share in arrears	1 Fixed Fee Per Unit	3 Fixed fee per unit/kg % of sales price Actual Recycling Costs based upon market share in arrears	3 Fixed fee per unit Actual Recycling Costs based upon market share in arrears Customs levy fixed fee per unit imported (White Goods Only)	2 Fixed Fee per unit Fixed fee per product price band
Visible Recycling Fee	Yes	No	Yes	No	Yes	Yes
Historic/Future split	Yes	No	Yes	No	Yes	No
Household/Commercial split	Household Only	Both	Household Only	Both	Both	Both

* Non EU Collective Producer Responsibility Schemes Only.

Operating Reserve indicates funds to cover ongoing activities. Future Provision indicates funds allocated for future historic waste under a visible fee system

8.6 Administrative Cost and Efficiency of the Schemes

Some of the compliance schemes are run on a more efficient basis than others. Producers favour those compliance models that do not require the creation of large financial reserves by a national compliance organisation and that ensure the efficient use of the income stream.

There is significant variation in the level of management overhead and costs between schemes, mostly related to whether a Producer Responsibility Organisation (PRO) establishes an in house logistical and/or monitoring capability. Recupel, which does both, employs a workforce of approximately 25 employees. ICT, which does neither, operates with 2 employees. Management overheads and administration account from between 3.5% (El Kretsen) to 7.5% (ICT Milieu) of total budget, and even with the inclusion of marketing and external auditing activities, never exceed 10% of revenue.

One of the key measures is the number of staff employed by the compliance scheme. This is in part due to the level of outsourcing of activity. Compliance schemes, such as Recupel in Belgium, employ a significant workforce, but maintain that it is cheaper to employ marketing, legal, monitoring and some logistic functions in house than outsourcing these, and that in house capabilities deliver a better level of control and quality.

Despite several schemes producing clear annual reports, many producers still consider that cost transparency is an issue. Producers felt the established compliance schemes demonstrated significantly different costs, thus demonstrating that some are much less efficiently set up and run than others. It was felt that the different legal requirements from country to country certainly explain some of the difference but not the entire difference. As one producer indicated, “Cost vary dramatically from one country to the other, and do not evolve much over time, a clear proof of lack of incentives to increase efficiencies.”

Additionally, there seems to be significant cross subsidising between products in individual categories, with recycling fees bearing no relationship with actual recycling costs for a given product. The level of cross-subsidy between products within a certain category, and between product categories reflects a trade off between administrative simplicity and actual cost. For example, NVMP has significantly reduced the number of fee categories (abolishing some altogether) that it employs to save on reporting costs and reduce the administrative burden on producer members. Cross subsidy requires agreement amongst producers that any inequity in allocating costs is outweighed by simplicity of procedure.

8.7 Administrative Demands on Producers:

Most of the producers consulted found participation in the various schemes to be relatively straightforward and assessed the administrative burdens and compliance costs placed upon their organisations as acceptable if not ideal.

However, several producers expressed their longstanding concerns about a few of the schemes and complained about the administrative burden, data collection requirements, product classification and lack of understanding of how member companies and their markets operate. Some schemes seem to have improved since they use current market share calculation as a basis for their operations.

Equity and Enforcement

Several recognised that there is a grace period in establishing the scheme and respondents indicated that it took a year for the relationship and operating interface with a compliance scheme to settle, although significant time and effort is still required to maintain it.

Compliance requirements and costs

Some recycling compliance schemes were seen to be overly demanding in their requirements for data submission, much of which is not necessary to conduct collection and recycling operations properly. Where fee-based systems are used, the paperwork and monitoring requirements increase significantly according to the number of product classifications and fee bands, both for the scheme and producers. El Kretsen attracts some criticism from industry for the complexity of its reporting and fee structure, covering more than 50 product classifications. In the same way, where a scheme reimburses participants in the scheme operation, such as collection sites (ICT), retailers (NVMP) or kerbside collection services (Recupel, NVMP), so the administrative costs increase.

Very few of the producer respondents were able to provide accurate figures for administrative and compliance costs for the various schemes in which they operate, reflecting the complexity of complying with various schemes. Exact numbers for human resources are difficult to give. Some put the requirements as ‘not man-hours but man-months’. Another producer who had studied their time investment indicated an initial 10 days per country in contract negotiation 3 days per year per country in administration plus additional time dependent upon the frequency of reporting, from 2 days (yearly reporting) to 7 days (monthly reporting).

The ‘WEEE Directive overhead’ experienced by producers operating in multiple countries is regarded by them as unacceptably high. For organisations operating at an EU level, the burden would equate to multiple full time resources whether at central European level and/or in countries to insure proper compliance. A pan-European approach will clearly limit this burden, and harmonization of reporting across Europe would be an additional very significant benefit. One producer summed up the difficulties facing producers as follows: “Considering 25 Member States plus Switzerland and Norway and multiplying this by 3 (WEEE, packaging, batteries) we have to provide data to 81 recycling compliance schemes. It is therefore essential, especially for SMEs selling in different Member States, that the type of data to be provided to recycling compliance schemes is harmonized throughout Europe wherever possible.”

8.8 Key Success Factors

Consultation process

All respondents indicated the importance of consultation. It is broadly accepted that national systems should be run and managed by industry within a sound legislative framework established by responsible authorities in consultation with stakeholders.

Understanding local context

While national authorities have spent considerable time studying the legal and operational approach in those countries with established WEEE schemes, all have

indicated the importance of building systems that meet local specifics of culture, geography and industry, and that take into account existing practices of waste collection. There is some indication that national approaches may face challenges from recyclers and producers seeking to develop pan-European or multi country systems.

Build upon existing infrastructure

Use experience with existing collection systems – easier to deal with 4 collective schemes rather than thousands of importers/producers.

Build First, Measure and Monitor Later

The majority of scheme legislators and managers suggested that countries should get any system up and running before committing themselves to performance and target setting. The prevailing view was that there are simply too many unknown variables to accurately predict volumes and costs, and that only through experience will the judgement be made about what is effective.

Balance Costs and Environmental Impact

All schemes described a ‘creative tension’ between ensuring maximum compliance and lowering costs. The lowest cost solution may compromise the desired environmental outcome. There are many false economy traps to fall into and it is important that there are acceptable and realistic ambitions for volumes, costs and standards.

Ensure one national collective system and administration body

Some legislators stressed the importance of ensuring that single strong national ownership was maintained over scheme administration and that any structure to provide oversight should be cohesive. All indicated that any move towards individual producer responsibility would be complicated to police, cost inefficient and prove impractical in relation to the provision of a financial guarantee.

European Integration

It may be expected an increasing interest from industry and funding producers over the coming decade to provide a better-integrated and more efficient European system. National producers organisations have organised themselves into a collective through the European WEEE forum. How this will develop remains unclear, as all schemes are very much nationally orientated. Some legislators talked about a pan-European system with specialist regional hubs providing large volume low cost treatment plants.

One Face for the Consumer

The success or failure of a WEEE programme will be in part dictated by the clarity with which it can be explained to the consumer, and the ease with which the consumer can engage with the collection and financing system. Messages need to be clear and effectively channelled. Different collection systems for different products cause consumer confusion and reticence, and detract from efficiency.

Equity and Enforcement

Compliance and free riders

The lack of enforcement by government was a recurring theme amongst scheme managers. The failure to punish free riders and hold non-compliers to account was the biggest single issue impacting the cost effectiveness and equity of the schemes

Efficient sorting and charging system

All the schemes reviewed have settled upon some form of current market share model, either through fees on products sold, or allocation of actual costs to products placed on the market. All scheme legislators and managers regarded sorting by brand as highly inefficient and costly by comparison. Where it had been tried, in ICT Milieu, it had been abandoned due to the high proportion of orphans. This model is considered unworkable in a fast moving product sector where the manufacturers and their market shares change more rapidly than the life cycle of their products.

Recognition of different financing needs of specific sectors

ICT companies are on the whole keen to see a system whereby real costs are apportioned according to market share, whilst brown goods companies prefer a model with a visible fee component. In reality, the Brown Goods producers who are promoting the case for the visible fee have arguably a far greater potential historic waste burden to contend with than do those IT companies who are against mandatory visible fees. National schemes that were able to accommodate these differences through differing financing models, such as El Retur (Norway) and El Kretsen (Sweden) do not require the development of multiple compliance schemes as is the case in the Netherlands with NVMP/ICT Milieu.

9 Equity and Enforcement

Key to the successful operation of a national compliance system is ensuring that producers and other players in the WEEE supply chain feel that the burden of compliance is fairly shared. This relates both to the allocation of responsibilities, both for historic and future WEEE, but also to the ability to ensure that interaction with the compliance structures does not become too burdensome.

For many governments, enforcement of the Directive is a resource issue, and they are seeking to rely on the compliance schemes to self-police. The level of investment put into enforcement is a matter of trade off between cost and coverage. Schemes will seek to find the point of diminishing returns, where the cost of free-riders and orphan product equals the cost of funding compliance. As one legislator put it, “it is for industry to decide the extent to which it is willing to tolerate free-riders or spend resources on solving the problem.” The register is usually operated either by government or by a non-profit government proxy, and financed through annual registration fees.

9.1 Equity

Financing Mechanism

The perception of scheme equity amongst producers and distributors is broadly a question of the type of financing mechanism employed. Opinions seem to reflect the product area and history of the company involved. Brown and White Goods companies, with significant historical waste responsibilities appear to support visible fee mechanisms. Indeed, White Goods producers feel overly impacted by the Directive, given that 75 % of the volume to be treated are White Goods. ICT companies and those with a more limited historical waste burden tend to dislike schemes based on accruals and fund forming and prefer those based upon actual costs billed in arrears. Schemes such as El Retur and El Kretsen that have demonstrated the flexibility to accommodate both financing systems are welcomed. Equity is an issue that depends upon the preference of allocation of cost over collective risk. There is a strong cultural difference between firms who regard the visible fee as the best solution for historic waste and orphan products, and those who regard a ‘pay as you go’ model.

Complexity vs. Efficiency

The European WEEE systems are faced with a constant challenge to balance administrative efficiency against the desire to relate real costs of recycling a given product to the fee charged. Whilst efforts are made to reflect the actual costs of transport and recycling in the individual product fee where applicable, there is inevitably a point at which it is administratively more efficient to bound different products together into one product grouping or to set the fee according to retail price. By way of example, NVMP has dramatically reduced the number of products on which it collects fees and rationalised its fee system into only a handful product groups. Likewise, SWICO does not charge any fee on any products below 50 CHF (c.35 Euro). At the other extreme, El Kretsen and El Retur use a more complex system of up to 50 product categories, each with their own price allocation. The system provides a better reflection of the costs of recycling the individual products but has led to some complaints from industry about the workload and level of detail that is required to compile the returns.

Impact on Small and Medium Firms

Where costs are calculated on market share, such as in ICT Milieu, when market share data becomes difficult to collect due to small volumes, nominal charges are made for participation in the scheme. These charges may reflect some element of subsidy, but reflect the practicalities of running a system and are agreed upon in advance by the industry participants that manage the trade associations. Several schemes acknowledge the financial/administrative burden for small enterprises.

9.2 Free riders and Enforcement

Free riders and orphans create equity problems for scheme members who have to pick up the additional costs for the recycling of additional product. Mature schemes have only a moderate track record in enforcement and ensuring full compliance with free-riders currently representing between 10-20% by volume of product placed on the market (although the percentage of non compliant firms is often higher, the smaller ones falling through the net). NVMP for example has been going for about 5 years but does still not have full compliance. All respondents regarded ICT Milieu as having an issue with free riders, with El Kretsen, and NVMP also having significant problems. Of all the schemes, Recupel was seen as being most comprehensive and best enforced. Table 3 provides some indication of the level of participation in the respective schemes. Producers suggested legislation where products could only be sold where their producers could provide proof of registration. National Collective compliance schemes were generally indicated as a way of ensuring good market coverage and reducing the problems of free-riders and orphan products, but only in conjunction with the state.

Table 3. *Established Schemes - Participating Organisations and Estimated Free Riders¹*

Country	Scheme	No. of Participating Members	Estimated Free-riders (% Market Volume)
Belgium	Recupel	900 ²	10%
Denmark	Targeted Tax	278 ³	n/a
Netherlands	ICT Milieu	178	10-20%
	NVMP	400	10%
Norway	El Retur	675 ⁴	15-20%
Sweden	El Kretsen	500	10-15%
Switzerland	SWICO	250	10-20%

Roles and Responsibilities

¹ As indicated by PROs in face to face interviews (2003 data)

² Several producers belong to more than one sector scheme. There are 1475 affiliations in total.

³ Local Municipalities – No producer responsibility

⁴ 514/161 Figures refer to Elektronikkretur (514) and Hvitevareretur (161) respectively.

Whilst recognising that there is an element of industry self-policing, producers regard enforcement as the role of the government, not the producer, through effective legislation and prosecution. Enforcement calls for efficient procedures (National Register, reporting, etc.) and full implication of Member States authorities to ensure compliance of all producers through the monitoring, inspection and possible sanctions against offenders. The need for clear legislation, a strong centrally-managed producer register and proper enforcement, using an effective system of fines and incentives were all regarded as essential. Many indicated that current performance of legislators in this area required significant improvement. There was some confusion over whether the responsibility for ensuring compliance in countries with collective schemes lay with the scheme or the government.

Point of Diminishing Returns

Policing of Free-Riders is costly, and at some point, costs are higher than the benefits to producers. Some respondents regarded the level of Free riders as inversely proportional to the level of control and enforcement of rules/fines. Belgium was identified as having invested heavily in enforcement and had achieved strong compliance, although at some administrative cost. In addition, countries where compliance schemes are live (i.e. Holland, Belgium) run low volumes of products, but larger countries such as UK/Germany/Italy may require serious market controls.

10 Future Developments and Opportunities

The main challenges and impacts of the Directive are still to be experienced in most countries. Several do not yet have their legislation in place. Many do not have compliance structures ready. Compliance scheme managers, producers and legislators expect a period of market development and consolidation as the systems mature. Most of those responsible for legislation stated that they intended to ‘learn by doing’ as implementation progresses, an approach supported by those countries with existing experience of developing and managing take back schemes. Significant operational and legislative adjustments are expected to be required as implementation of take-back schemes begins. There are a number of trends and activities that respondents highlighted in the consultation process that will shape the development of the market and operation of WEEE compliance in Europe.

10.1 Roles and Responsibilities

Much of the interpretation of the Directive has been left to the EC technical committee, which is not felt to be appropriate. Many felt that clarity needed to be given over the obligations of the Member States and the Commission, whose recommendations remain ‘indicative recommendations’ and do not hold legal. Member States should either feel that they have the option to interpret the Directive to local circumstances, or greater effort should be made centrally to harmonise definitions and structural approaches. At the moment, many feel as though they are caught between these two approaches

10.2 Review and Revisions of the Directive

All respondents saw the opportunity for a review of the Directive in 2008 as an opportunity to address one or more of the issues raised earlier in this report. The most common of those are listed below and represent the views of respondents rather:

Producer Definition:

Clarify ambiguities to ensure harmonisation of legislation and uniform compliance requirements across the EU 25.

Product Definitions:

Annex II and product definitions were another area for review as it was felt that it should be left to industry to decide on technology, rather than accept proscribed descriptions from legislators.

Visible Fee:

Those legislators and producers who supported the concept of a visible fee indicated that there was a significant level of support for extending its applicability beyond the timescales indicated in the Directive in order to encourage consumer understanding of waste issues, to reduce the psychological impact of product pricing and to protect producers from absorbing the cost of collection and treatment in competitive markets.

Individual Producer Responsibility:

Some respondents involved in the development of the Directive over the last decade expressed their disappointment that concept of ‘Individual Producer Responsibility’ was less present than had been hoped initially. As a result, better design practices are not promoted, directly or indirectly by the Directive. Many of the interviewees expressed their disappointment about the missing incentives in the Directive for better environmental performance: they will be charged for their products on the kg basis, independently from the attributes of their products in the same category.

10.3 Opportunities for EU Level Harmonisation

National Scheme Divergence

Progress to date of the transposition of the WEEE Directive into national law already reveals major differences from one legal system to another. Many respondents felt it highly likely that national implementation models will continue to diverge as they develop. Producers in particular saw the need to coordinate national compliance schemes to align processes and costs.

There was general understanding that a degree of harmonisation and application of best practice across the EU would avoid the distortion of competition in the EU internal market and that the competitiveness of the EU economy versus the rest of the world is not jeopardised. There are concerns among some producers that overly ambitious collection and treatment standards might place EU producers and manufacturers at an economic disadvantage, and that within the EU, certain countries would seek to gain competitive advantage by applying only minimum targets and deploying minimal oversight of recycling and treatment standards. The revision of Directive 2002/96/EC should therefore focus on ensuring a level playing field, before setting a more ambitious collection, recovery and recycling regime.

Product Definitions

Most respondents felt that the process for defining the product scope had become over burdensome. Several times, the research team were shown the extensive and growing list produced by Austria to cover 680 types of equipment covered by the Directive of which updates are planned on a regular basis. Some respondents felt that it would be best to have a single list for Europe decided by the TAC, or to indicate clearly to Member States that the product inclusion is a matter for local interpretation. Whereas the list of FAQ issued by the Commission proved useful for many, for others it raised as many questions as it answered.

Registration of Producers and of Non Country Based Importers

There is some discrepancy amongst Member States as to whether producers (i.e. importers) who do not operate in the country but operate instead through direct sales should be registered. For example, registration in Austria is required only for businesses with an Austrian address, ie, Austrian importers/agents/ representatives of non-Austrian companies. In the case of direct sales to end-users, there is no registration requirement, however, the end-user is responsible for disposing of the equipment according to applicable law.

The EU Register is regarded as the most likely area for harmonisation of processes. This would initially require the standardisation of processes for producer notification and registration across the EU.

EU Treatment Standards

Further attention should be given to harmonising treatment standards across the EU, as it is felt that currently, quality of recycling varies considerably.

10.4 Harmonisation with Other Directives

There is a number of End of Life Directives currently at different stages of implementation, in areas such as vehicles and batteries. These Directives have developed parallel structures for compliance and more integrated approaches across the EU. There may be some merit in examining harmonising processes between these Directives. Coordination with the RoHS Directive is also an ongoing concern for Member States. Some further analysis is required to understand the interplay between the WEEE Directive and Directives such as RoHS, Ecolabel and EuP to assess whether they are mutually supportive or detrimental in environmental and economic terms.

10.5 Treatment and Technology Developments

Consolidation of Transport and Treatment Services

The provision of transport and treatment services is an area susceptible for the consolidation of activities at European level. Many of the new Member States have significantly lower labour costs than the existing EU 15 and close land borders. At the same time, these countries (with the exception of Poland) do not have significant WEEE volumes, and so there may be competition for import capacity. It is expected a significant growth and consolidation of collection and recycling services to enable more efficiencies and economies of scale. Household WEEE will be recycled in big sites because volumes will increase significantly. It allows better technology and cost is expected to decrease. Some key contractors may appear both at National and European level (with excellent logistic and high-volumes recycling plant) and swallow small actors. Some synergies may develop on a regional basis, such as on the Iberian Peninsula, in Scandinavia and in South Eastern Europe where volumes and close regional proximities will allow for market consolidation.

Changes to WEEE economics and technologies

Producers foresee significant changes in recycling technologies, as high quality recycling plant technology will begin to become cost effective. Recycling cost should drop down in 5 years with the main changes being in the fridge recycling process. Waste handling/transport/sorting is one of the major parts of overall WEEE costs. Logistic costs will probably remain almost steady in 5 years as handling, sorting and transport are difficult to optimise, in particular for product at end-of-life. Volumes channelling into disassembly type operators will increase gradually as householders become more aware and collection schemes extended their reach.

10.6 Pan European Compliance Schemes

Producers operate mostly on a Pan-EU basis, and will look to create efficiencies in their compliance with the Directive at an EU level. This thinking has given some encouragement to the development of regional and Pan-European compliance activity. Pan-European schemes may enable the necessary evolution and consolidation of the WEEE take-back market, and therefore deliver efficiency gains that benefit customers. These efficiencies can also have a positive impact on the environment through proper technology investments enabled by economies of scale and transportation optimisation.

European Recycling Platform

The most prominent Pan-EU system is the European Recycling Platform (ERP). The ERP is an undertaking by Hewlett Packard, Sony, Electrolux and Braun to develop pan European compliance structures. ERP is contracting operators to design, operate and manage all aspects of the compliance process, although activity remains in planning rather than operational. Many of the respondents expect this to be an ongoing area of development, where small groups of producers explore opportunities to reduce their internal logistics costs and manage their external costs.

Whilst those responsible for legislation and managers of national compliance schemes felt the medium term options for Pan-European compliance schemes were limited, there was a general level of understanding amongst producers that compliance structures would slowly migrate towards a more unified and integrated model.

There is a core group of firms well disposed to the idea of a pan-European model. Several are supporting the European Recycling Platform (ERP). To work effectively, ERP must establish national schemes in several countries (gaining legal approval to operate). This means the ERP should be allowed “access to waste” within each country. This could be achieved through a national clearing house as proposed in Germany, UK, and Austria. It could also be achieved by splitting collection responsibilities between regions or by competing for local collection agreements with municipalities and retailers. The ERP does not need to transport WEEE outside of country of origin, but develop Pan-European agreements with networks of providers with operations in all ERP countries. Those who support the idea regard them as an important opportunity to develop very much-needed alternatives to the national schemes, to create competition, which in turn will stimulate efficiency and cost reductions. As one respondent indicated, “why deal with 25 consortia where a few Pan-European ones can do the job?”

Several firms were sympathetic to systems that offered cost-optimisation through economies of scale and rationalization. More than one firm reported having discussed the idea at board level for individual categories under the Directive. One respondent saw such an approach as being most useful when trying to reuse parts and whole appliances to develop economy of scale in such processes more than in scrap operations, which required large local volumes and short distances. These firms also ruled out any participation in those systems if it implied that producers should undertake recycling activities themselves as this is seen as non-core business. Adaptation and flexibility were the key words and respondents only saw such platforms working alongside or possibly within national compliance schemes where this was the most practical and cost effective solution.

Many national authorities and producers, however, remain sceptical, at least in the short term. Respondents mentioned the logistical difficulties of coordinating a scheme on such a scale. Others thought a Pan-European producer compliance scheme would be prevented from working successfully given that legislative requirements differ so much in each country. A Pan-European scheme would put systems in place to manage WEEE according to the requirements of each individual country's requirements. If national compliance schemes exist, then Pan-European compliance schemes could only be customers of the national schemes and negotiate contract with them as a service provider.

There was general sympathy for movement towards this position in the medium to long term, but only with much greater coordination at European level e.g. Pan-European register of producers and quantities, an EU clearing house, etc. Some respondents also noted developments in technology, such as purchasing platforms and web based management systems that could facilitate this process into the future. The WEEE Forum was identified by some as a fledgling body that might play a role in the development of any Pan-European scheme.

10.7 Best Practice and Benchmarking

Cooperation between Member States

Cooperation between Member States is already taking place. In the WEEE technical committee, discussions are on-going regarding whether details provided by producers for registers can be harmonised (i.e. the same type of information for all registers). Work is also being done at the European level on financial guarantees and how they will work. The quality of recycling facilities will be another area for cooperation. Recycling may be concentrated at a few facilities for the whole EU.

Inter-scheme consultation

Several of the larger countries have examined established EU schemes in Benelux and Scandinavia in the development of their own national schemes. Schemes in Switzerland and Norway have also been examined. UK, for example undertook a review of schemes in 6 countries before deciding upon a scheme without mandated fees. Sweden has been visited at least by an Irish delegation that came to study Sweden's WEEE implementation. In the new Member States, national models instead of copying one single model from Western European countries try to utilise and combine the merits of the existing models, where known. In Eastern Europe, countries are taking into consideration the Hungarian legislation, which was issued the first in the region.

Common Factors in Established Schemes

Scheme managers and legislators in countries with established take back systems identified 3 common denominators that underpinned the success of their schemes but which might be absent in other countries:

- Smaller populations (<15 million) and/or geographies
- Strong and centralised trade associations and industrial lobbies able to create consensus, develop and manage national programmes
- A culture of recycling and environmental awareness and a proven track record in establishing other recycling schemes (tyres, batteries, end of life vehicles)

Identifying Relevant Benchmarks

Countries tend to benchmark themselves against their equivalent competitor states in terms of their performance and state of readiness (UK, France, Germany Italy), Scandinavia and Benelux, New Member States. Sweden follows developments in other countries, particularly in other Nordic countries because of the Nordic cooperation in which the EPA participates. The EC's technical committee (TAC) provides a useful forum to allow legislators to benchmark progress between states.

Role of the WEEE Forum

The 'WEEE Forum' is helping in sharing best practice amongst compliance schemes and its activities are generally welcomed, although there were some concerns that its ethos was developed some existing national collective models and that membership was restricted to compliance schemes that are industry owned, not for profit and collective

11 Overview of National Legislative Situation ¹

Country	AUSTRIA
Transposition	<p>The WEEE Directives are being transposed into Austrian law through:</p> <ul style="list-style-type: none"> • A new <i>Electro Ordinance (EAG-Verordnung)</i>. A draft was published on 19 November 2004 for consultation. The draft was rejected by industry (see FEEI below) and a new version released on 10 March. It was planned to enter into force on 1 April. The Electro Ordinance supersedes Lamp and Cooling Equipment Ordinances. • The new <i>Ordinance on Waste Treatment Obligation</i>, published on 3 December 2004. • An Amendment of the <i>Waste Management Law (AWG)</i>. It was approved by the Bundesrat on 20 December 2004 and entered into force on 1 January 2005. • Electro Ordinance Adopted August 2005
Key Provisions	<ul style="list-style-type: none"> • <i>Deadlines for Manufacturers:</i> <ul style="list-style-type: none"> ◦ Registration at Umweltbundesamt website: Before 31 May 2005; ◦ Data reporting (units per type & collection category placed on market): Quarterly, from Q3-05 at the latest 31 October 2005; ◦ Collective systems: Proof before 31 July 2005 share of min 5% in one collection category by mass, OR min 20% of several categories. • <i>Collection of WEEE from households:</i> Collection through communal collection points. Producers to pay a flat rate to communes that includes financing for containers, building changes required by the treatment ordinance and information to consumers. Five collection categories (large appliances, cooling equipment, CRTs, small appliances, gas discharge lamps). 1:1 take back at retailers. Producers may 'opt out' of municipal collection in separate collection systems. • <i>Clearing house:</i> Environment Ministry responsible, but may transfer tasks to a qualified legal entity. Communes prefer the Environmental Agency as clearing house; industry prefers to set up an independent organisation. The manufacturers' register is operated by the Umweltbundesamt. • <i>Historical Waste:</i> Producer's share determined by clearing house on weight basis. Producers must participate in system. Visible fee allowed. • <i>'New' waste:</i> Producer's share determined by Clearing House, unless producer/system has contracts for separate collection with municipal collection centres. Visible fee not allowed. • <i>Guarantee:</i> Participation in system or blocked bank account. • <i>Non-household WEEE:</i> Mandatory 1:1 take back of historic WEEE. New' WEEE: Individual agreements. • <i>Collection and treatment systems:</i> A compliance system shall 1) take back all products of one or more of the 5 categories; 2) shall operate at least 1 take back centre per district and 3) shall represent at least 5% EEE by weight of the category covered. • <i>Marking:</i> No producer identification for imported products using a collective system.
Compliance	<ul style="list-style-type: none"> • UFH – Umwelt Forum Haushalt had announced plans to set up a holding company with 5 subsidiaries (one for each EEE collection category) to act as collective systems.# • ERA (All Categories) • ERP (All Categories Except Lighting)

¹ We acknowledge the use of the information supplied by Perchards in the preparation of the tables presented in this chapter.

Overview of National Legislative Situation

Country	BELGIUM
Transposition	<p>Producer responsibility and waste treatment regulations are the responsibility of the 3 regions. They are adapting existing legislation and voluntary agreements with producer organisations to transpose the WEEE Directive:</p> <ul style="list-style-type: none"> • <i>Flanders</i> – The VLAREA Ordinance of 2002, amended in December 2003, was amended a second time on 8 October 2004 and has entered into force on 1 December 2004. The VLAREA goes beyond the WEEE Directive, e.g. by requiring collection of 7 kg WEEE in 2006. • <i>Wallonia</i> - Two draft measures, an amendment of the Producer Responsibility Decree which will transpose the provisions relating to producers, and a new decree transposing the provisions on collection and treatment facilities, passed the Environment Committee and the Conseil d'État during the summer, and requested minor amendments are being incorporated. Adopted March 2005 • <i>Brussels Region</i> - An amendment to the existing Producer Responsibility Decree was promulgated on 3 June 2004 and published in the Official Gazette on 28 July. A second decree covering collection and treatment facilities was approved on the same day but has not yet been published.
Key Provisions	<ul style="list-style-type: none"> • <i>Household Collection:</i> Local municipalities organise collection points. Producers are charged for using these sites. Retailers offer 1:1 take back. • <i>Register:</i> Producers must inform Regional Authorities how they are complying by August 2005. Recupel manages a producer registration scheme. • <i>Visible Fee:</i> Allowed until 2011 (2013 for large appliances) • <i>Historic WEEE:</i> Financed according to current market share, or otherwise by financial guarantee • <i>B2B WEEE:</i> Producers responsible for WEEE post 13 Aug 2005. Producers responsible for pre-Aug 13 2005 where replacement is purchased. • <i>Financial Guarantee:</i> There is provision for financial guarantee for individual compliers. Joining a collective compliance scheme serves as a guarantee.
Compliance	<ul style="list-style-type: none"> • <i>Recupel:</i> Industry managed <i>RECUPEL</i> has been the only recovery organisation for Brown and White Goods, ITC and small domestic appliances since 2001 and gardening tools and lighting equipment since 2004. Discussions between government and industry about whether Recupel should handle the remaining WEEE are on-going. • <i>BEBAT</i>, the battery recovery organisation, has taken back electric torches since July 2004.

Country	CYRPUS
Transposition	<ul style="list-style-type: none"> • <i>Regulation 68-2004</i> transposing the RoHS and WEEE Directives was approved by parliament on 30 July 2004.
Key Provisions	<ul style="list-style-type: none"> • <i>Financing WEEE from households</i>: Producers have to organize and finance separate collection. Municipalities are not obliged to collect. • <i>National register</i>: Producers have to register with the Statistical Service and the Environment Service of the Ministry of Environment. • <i>System requirements</i>: A joint system is to be approved by the Environment Committee, made up of representatives of different Ministries.
Compliance	<ul style="list-style-type: none"> • Ministry held first seminar on WEEE regulation on 6 Dec04, with 25 representatives from producers. The Cyprus Chamber of Commerce and Industry is expected to present a proposal for a joint system.

Overview of National Legislative Situation

Country	CZECH REPUBLIC
Transposition	<p>The WEEE and RoHS Directives are transposed in the following texts:</p> <ul style="list-style-type: none"> • The <i>Waste Act Amendment 7/2005</i> transposes the RoHS Directive and stipulates the broad provision of the WEEE Directive, leaving details - particularly about producer systems and the central register - to further regulation. The draft was approved by the Council of Ministers in June 2004, was ratified by the Senate and President on 16 December 2004 and was published on 6 January 2005. • Two ministerial decrees will specify the practical operation further: one is being drafted by the MoE (on the role and specific responsibility of stakeholders, marking, treatment, etc. and the targets) and the other one (on financing aspects) is by the Ministry of Finance. They are both expected to be published in mid-June, however in the time of interviewing there were still a lot of uncertainties with the details of legislation in general, but the main issue is the transposition of the financing obligation. The registration starts on 15 August 2005 and producers have 60 days for application. The system is expected to start by 13 August by governmental officials.
Key Provisions	<ul style="list-style-type: none"> • <i>Deadlines:</i> Registration of producers no later than 60 days after 15 August 2005. • <i>Collection of WEEE from households:</i> Producers may use municipal collection points or set up own collection. Producers to provide containers for municipal collection. Currently 4 collection categories planned (refrigerators, CRT, lighting, others). 1:1 take back at retailers mandatory, financing not defined. • <i>Central register:</i> Obligation of Ministry of Environment, at least initially. Registration mandatory. Producers should have applied by 13 October 2005. • <i>Collective System:</i> Needs to collect all products of a least one of the four categories. • <i>Visible Fee:</i> Allowed until 2011 (2013 for large appliances). Level to be determined. • <i>B2B WEEE:</i> Producers responsible for WEEE post 13 Aug 2005. Producers responsible for pre-Aug 2005 where replacement is purchased.
Compliance	<p>At least 5 collective systems are in preparation:</p> <ul style="list-style-type: none"> • <i>RETELA</i>, is being planned by the <i>Czech and Moravian Electrical And Electronic Association</i>. It will take back ITC, consumer electronics, power tools, medical equipment, monitoring devices. It is expected to open for registration in May 2005. • <i>CECED</i> is preparing a compliance organisation for large and small appliances and dispensing machines. • <i>Ecolamp</i> was started in mid 2004 but will only be finalised in Q2-05 by the <i>European Lighting Company Federation</i> (ELC). Cooperation with Ekovuk not clarified. • <i>DEWAREC</i>, a waste management consultancy has established has established REMA in March 2005 mainly for ITC but are planning activity in all sectors • <i>AREO</i>, the Association of Recyclers of Electronic Waste is considering a separate system or cooperation with RETELA.

Country	DENMARK
Transposition	<ul style="list-style-type: none"> • <i>Transposed 05/05:</i> An Amendment of the Waste Management Act was approved by Parliament in May 2005. A draft Statutory Order on WEEE was published for consultation on 18 March 2005
Key Provisions	<ul style="list-style-type: none"> • <i>Household WEEE:</i> Producers will be responsible from Jan 2006. Local Government must ensure adequate coverage for free municipal collection points, and must agree collection arrangements with producers. Retailers accept WEEE on 1:1 basis. • <i>Historic WEEE:</i> Collective financing based on Market Share • <i>Financial Guarantee:</i> Collective schemes with more than 30% market share in a category are exempted from guarantee. Individual compliers must provide guarantee • <i>B2B WEEE:</i> Producers have a responsibility for B2B WEEE placed on market post-13 August 2005. Producers responsible for pre-13 Aug 2005 WEEE if replacement purchased, otherwise End User Responsibility • <i>Visible Fee:</i> There are no plans for a visible fee • <i>Clearing House:</i> the Environmental Protection Agency (EPA) will manage the clearing-house. • <i>Register:</i> The register will be managed by the Environmental Protection Agency – a board is being recruited. Registration deadline was set for October 2005
Compliance	<ul style="list-style-type: none"> • <i>EPA El Retur:</i> EPA El Retur has been formed and will begin operations in April 2006 across all product categories, both household and B2B. It is expected that there may be other compliance organisations formed, but the number will be limited due to the high level of market share required

Overview of National Legislative Situation

Country	ESTONIA
Transposition	<p><i>Expected end 2005</i> The WEEE Directive will be transposed through</p> <ul style="list-style-type: none"> a further amendment of the 1998 <i>Waste Act</i>. The last amendment in April 2004 transposed provisions for producer responsibility for WEEE. A further revision was undertaken in September 2005 that will make registration with a Central Register mandatory. a new <i>Government Decree on Producer Responsibility</i> is still under discussion. a new <i>Ministerial Decree on Treatment Requirements of WEEE</i> transposed the treatment provisions. Its approval was expected shortly after the Producer Responsibility Decree at the end of January, but in February the Estonian Employers' Confederation, representing the Estonian Traders Association and the Association of Estonian ITC companies rejected the draft.
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE from households</i>: Producers 100% responsible for financing separate collection systems. They may contract to municipal waste collectors (very little WEEE collection presently). 1:1 take back at retailers. Retailers required to take back any WEEE in category they sell if no industry collection point within 10 km radius. (Industry is opposing this requirement arguing that kerbside collection is suitable in many villages). <i>Marking</i>: Marking to show full producer address. (Industry opposed and proposed a code system and requested more time for implementation.) <i>Central Register</i>: Producers to register with Environment Information Centre, a division of the Environment Ministry. Waste Act amendment will make registration mandatory. <i>Financial Guarantee</i>: Provision is made for individual compliance with a financial guarantee.
Compliance	<ul style="list-style-type: none"> <i>EES-Ringlus</i>, a project of 26 producers representing about 60% of EEE on market, is being registered as legal entity in January 2005.

Country	FINLAND
Transposition	<ul style="list-style-type: none"> Act 452/2004 amending the 1993 Waste Act was adopted by Parliament on 4 June 2004 and Ordinance (852/2004) on Electrical and Electronic Waste was adopted by the Government on 9 September.
Key Provisions	<ul style="list-style-type: none"> <i>Household WEEE</i>: Producers are responsible for organising and financing the collection of WEEE from households. Retailers must either take back WEEE on a 1:1 basis, or indicate to the consumer an alternative reception facility (e.g. a facility that the retailer has an agreement with) <i>B2B WEEE</i>: Producers are responsible for the cost of managing non-household WEEE put on the market after 13 August 2005. They must take back products put on the market before that date on a 1:1 basis. Producers and purchasers other than households can agree on alternative arrangements if they wish. <i>Guarantee</i>: The guarantee for managing the "new" WEEE from households may take the form of a blocked bank account, recycling insurance or membership in an appropriate financing scheme (e.g. producer responsibility organisation) The approval of the guarantee to be decided case by case by the national authority within the registration procedure. <i>Producer register</i>: The Pirkanmaa Regional Environmental centre will run the nationwide producer registration system for Producer Responsibility Organisations and for producers who are not members of a compliance scheme.
Compliance	<ul style="list-style-type: none"> SERTY Oy: SER-TUOTTAJAYHTEISÖ (Society of WEEE Producers) has been set up to take responsibility for the waste management of all household WEEE. It represents 50%-60% of the large household appliances sector and 70%-80% of small appliances and consumer electronics. The <i>federation for the technology industry sector</i> is planning to set up four or five compliance organisations to take responsibility for B2B WEEE. <i>FLIP Py</i> (Lighting and Lamps) <i>SELT Ry</i>: (Lighting, Heating, Professional Electronics)

Overview of National Legislative Situation

Country	FRANCE
Transposition	A new WEEE Decree will transpose the WEEE and RoHS Directives. Under preparation since late 2003, it was approved by Cabinet on 25- Nov-04. Approval given by the National Council of Competition and the State Council July 2005. Several sub-decrees to regulate detailed provisions are in preparation.
Key Provisions	<ul style="list-style-type: none"> • <i>Collection of WEEE from Households:</i> If communes collect WEEE selectively, a Coordinating Organisation of producers will compensate them financially. For WEEE not collected by communes, producers to install a separate collection system. Retailers to take back WEEE at least free-of-charge on a 1:1 basis, may delegate to 3rd party. Costs allocated on the basis of current market share. • <i>Historical waste:</i> Producer responsibility for historic and new WEEE proportionate to equipment placed on market in same year (current market share). • <i>Visible fee:</i> Only allowed for historical household WEEE (categories yet to be determined). Will be mandatory for certain types of large WEEE appliances – must be shown on invoice and passed down through supply chain. • <i>B2B Historical waste:</i> Final holder responsible, unless otherwise agreed with producer. • <i>Central Register:</i> Responsible body not defined, but Adème (Environmental Agency) likely. Producer registration mandatory. Previously planned Central Register for retailers dropped. • <i>Financial Guarantee:</i> Participation in system, blocked bank account, deposit guaranteed by a bank;
Compliance	<p>There are several organisations for professional equipment, for household equipment there are several under preparation:</p> <ul style="list-style-type: none"> • <i>ECO-Systèmes</i> is being set up by <i>GIFAM</i>, the association of large household appliance producers in cooperation with retailers' associations to act as collective system for the nationwide collection of white and brown goods, incl. TVs. The project is led by a former Eco-Emballage manager and uses a logo similar to the Green Dot. • <i>SCRELEC:</i> Despite having carried out a large scale pilot project, SCRELEC will not serve as compliance organisation and its members from the EEE sector have joined the GIFAM effort. • <i>Alliance Tics:</i> an umbrella organisation of the telecommunications and IT sector considers setting up a collective system for its members. • <i>ERP</i> - See Germany section below.

Country	GERMANY
Transposition	Cabinet approved draft WEEE Law (ElektroG) transposing the WEEE and RoHS Directives on 1 September 2004. Parliament's lower house (Bundestag) approved it in mid-December and the Bundesrat (Länder) on 18 February 2005. It entered into force on day after its publication on 23 March 2005.
Key Provisions	<ul style="list-style-type: none"> • <i>Deadlines:</i> <ul style="list-style-type: none"> ○ At the latest 8 month after publication (i.e. 23 November 2005): <ul style="list-style-type: none"> ▪ Producer registration, Provision of collection containers ▪ Data reporting, Provision of financial guarantee ○ At the latest 1 year after publication (i.e. 23 March 2006): <ul style="list-style-type: none"> ▪ → Marking, Producer take back and treatment ○ <i>Collection of WEEE from Households:</i> Municipalities to operate and finance collection points for free-of-charge take-back. Producers to provide containers for six collection categories (Large household, Cooling, ITC, CRTs, mercury lamps, small appliances and others). Municipalities may recover collected WEEE themselves. NO 1:1 take back at retailers. • <i>Producer responsibility:</i> Proportional to share of EEE marketed in current year. For 'new' WEEE an individual producer may request the Central Register to calculate fees based on his EEE in waste stream only if the producer provides evidence of his share. • <i>Clearing House:</i> Responsibility of the Minister of Environment, but to be delegated to EAR, a foundation set up by trade associations ZVEI and Bitcom. Registration before 1 May 2005. Producers who sell directly to consumers in other Member States must also register. • <i>Financial Guarantee:</i> Individual and collective systems must pay a financial guarantee. The clearing house is responsible for deciding whether guarantee must be paid. BSG is developing an insurance scheme to manage risk and costs for compliers. • <i>Register:</i> EAR Foundation designated by Environment Agency to run register. Deadline November 24 2005
Compliance	<ul style="list-style-type: none"> • The <i>EAR Foundation</i> was founded on 12 February 2004 by 27 EEE manufacturers and 3 associations with the objective of accepting the 'sovereign' responsibilities from the government that are needed to act as single clearing house. Since March 2005, producers can test register on EAR Internet platform. Active registration is scheduled for June 2005. • The <i>European Recycling Platform</i> (ERP) the pan-European take back and compliance scheme initiated by Braun, Electrolux, HP and Sony announced the appointment of CCR and Geodis as general contractors in December 2004. • In August 2004 <i>Panasonic, Thomson and JVC</i> agreed to establish recycling program for electronics and electrical equipment initially and later for other categories. • Other industry players, e.g. <i>Philips, Sharp and Loewe</i>, have formed, or are in the process of forming, alliances to achieve bargaining power vis-a-vis the recyclers and obtain economies of scale. The competition authority has made it clear that it will not allow collective systems above 25% share of a collection category. • Waste management companies, mostly SMEs, are also seeking alliances with each other to be able to offer nationwide take back of all collection categories. <i>BVSE</i> estimates 20 such groups will emerge nationwide.

Overview of National Legislative Situation

Country	GREECE
Transposition	Presidential Decree 117 of 5 March 2004 transposes the Directives and applies the provisions of Waste Law no 2939/2001 to WEEE.
Key Provisions	<ul style="list-style-type: none"> • <i>Collection of WEEE from households:</i> Retailers to take back WEEE free of charge on a 1:1 basis. Municipal collection points to be set up. It will be forbidden to collect WEEE with other household waste. Compliance schemes must make provisions for collection from islands and remote areas. • <i>Central Register:</i> The Ministry of Environment, Planning and Public Works is to draw up a register of producers and collect information, including substantiated estimates, on the quantities and categories of electrical and electronic equipment put on the market, collected through all routes, reused, recycled and recovered, and on collected waste exported, by weight or, if this is not possible, by number of units. • <i>Historic Waste:</i> Will be paid for on a pay as you go basis according to current market share • <i>Financial Guarantee:</i> Provision is made for individual compliance with financial guarantee. Membership of a collective system acts as a guarantee. • <i>B2B WEEE:</i> Producers have a responsibility for B2B WEEE placed on market post-13 August 2005. Producers responsible for pre-13 Aug 2005 WEEE if replacement purchased, otherwise End User Responsibility • <i>Visible Fee:</i> Allowed until 2011 (2013 for large appliances)
Compliance	<ul style="list-style-type: none"> • A nationwide collective take-back and recycling scheme, Recycling of Appliances SA, secured official operating approval in July 2004. It has now published its 2005 fees (see next update). • Individual Compliance provided for under legislation

Country	HUNGARY
Transposition	<p>The WEEE and RoHS Directives have been transposed by:</p> <ul style="list-style-type: none"> • Government Decree 264/2004 on the Take Back of WEEE was adopted on 23-Sept-04. • Ministerial Decree 16/2004 transposing the RoHS Directive and Ministerial Decree 15/2004 on Treatment Requirements were both adopted on 8 October 2004. • An amendment to the Product Fee Act 103/2004 incorporating the WEEE categories entered into force on 1 January 2005. The fee is partly reimbursed if certain targets met.
Key Provisions	<ul style="list-style-type: none"> • <i>Deadlines:</i> Producer registration mandatory since 1 January 2005. • <i>Collection of WEEE from households:</i> Producers to bear all costs, including collection costs. • <i>Central Register:</i> To be hosted by National Environmental Inspectorate. Producer registration mandatory from 1 January 2005. • <i>Financing:</i> The Product Fee Act levies a waste tax on EEE from 1 January 2005. Producers participating in a collective system are exempt from the product fee from 1 March 2005, provided that the system has been approved. • <i>Financial Guarantee:</i> The high paid up capital requirement for collective systems (ca EUR 300K) is considered to provide the financial guarantee.
Compliance	<ul style="list-style-type: none"> • The Environment Ministry estimates that there are 10,000 companies affected by the WEEE regulation. By March 2005, about 220 had joined collective systems who offer very similar recycling fees. Concerns about the protection of the data submitted seems to influence companies' choice of a system, which ideally brings together companies that do not compete. <p>4 collective systems are currently recruiting members:</p> <ul style="list-style-type: none"> • <i>Electro-Coord</i> was set up by CECED and the Association of Producers of Lighting Equipment as compliance organisation for initially White Goods and lighting equipment and later all WEEE categories. It currently has around 120 members. • <i>Elektro-Waste</i> aims to coordinate the management of IT waste. It applied for a licence as compliance system in January 2005. It has about 40 members, mostly from the recycling industry. • <i>Ökomat</i> was founded by 12 companies from the gaming and vending machine sector in November 2004. Initially open only to these 2 categories, Ökomat extended its scope to all WEEE except mobile phones and refrigerators for which a licence has been requested. As at the end of March it had 60 members. • <i>Reelectro:</i> About 10 members.

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Country	IRELAND
Transposition	<ul style="list-style-type: none"> The draft legislation consists of three sets of regulations: amending the Waste Management Acts 1996 to 2003 in accordance with the provisions of section 62 of the Waste Management Act 1996 in order to provide the enabling provisions under which the detailed regulations for the two Directives will operate; implementation arrangements for the WEEE Directive; and implementation arrangements for the RoHS Directive. Regulations adopted July 2005 Derogation: The WEEE Directive sets collection, recovery and recycling targets, including the collection target of 4kg per person from private households, which must be achieved by 31 December 2006. Ireland has decided to avail of the derogation in the Directive which allows an extension of two-years in this deadline. Thus, the deadline which will now apply is 31 December 2008.
Key Provisions	<ul style="list-style-type: none"> <i>Financial Guarantee:</i> The Directive requires that producers provide a guarantee for products intended for private household use and placed on the market after 13th August 2005 by individual compliers. <i>Historic WEEE:</i> All producers will have financial responsibility for the collection, treatment, recovery and environmentally sound disposal of historic WEEE (i.e. products placed on the market prior to 13th August 2005) in proportion to their current market share as historical WEEE arises. <i>Collective Compliance:</i> The WEEE Directive allows producers to meet their obligations through a collective scheme; the draft regulations are based on the Repak model which has been operating successfully for packaging waste recycling where the collective scheme is approved by the Minister. Any collective scheme will have to seek approval in advance of commencement of the scheme and comply with any conditions which the Minister may apply. <i>Registration of Producers:</i> The WEEE Directive requires that producers of EEE be registered with an independent management committee. The Department is currently working in partnership with industry on the development of the Registration Body. In addition to registering producers the Registration Body will have responsibility in relation to determination of market share of producers and the assessment of financial guarantees. It will be self-financing on the basis of registration fees charged to producers. It is expected to commence, initially on a non-statutory basis, the registration of producers. <i>Retailers:</i> Retailers will be obliged to take back at least free of charge household WEEE on a one-for-one basis i.e. replacing the equipment of similar type. <i>Local Authorities:</i> Each local authority will be obliged to maintain a register of all retailers of EEE in its functional area, accept household WEEE free of charge from members of the public, and registered retailers who take back household WEEE on a one-for one basis. Environmental Protection Agency (EPA): The EPA will be will have the lead role in enforcing the WEEE regulations. These responsibilities relate to enforcement of producer responsibility obligations and, where appropriate, collection and treatment facilities.
Compliance	<ul style="list-style-type: none"> WEEE Ireland are currently establishing a compliance scheme. ERP have an appointed representative in the country.

Country	ITALY
Transposition	<ul style="list-style-type: none"> The Ministry of Environment finalized the draft <i>Legislative Decree on WEEE</i> which transposes both 2002/96 and 2002/95 on 12 January 2005. It now has to be approved successively by the Prime Ministers' office, the environment commission of Parliament and the Conference of the Regions. Final approval by the Environment Minister is expected in June 2005. The Decree will be complemented by several orders (concerning the central register, financing mechanism and marking) no later than 6 months after the Decree has come into force.
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE from households:</i> Tax-financed municipal collection centres to accept WEEE from retailers and consumers free of charge. 1:1 take back at retailers. Producers to finance from collection centres onwards. <i>Central register:</i> A National Register is to be set up close to the Ministry of Environment. Initially the draft foresaw the Chambers of Commerce responsible for Central Register, but industry lobbied for a single independent body. EEE importers must register with the Chamber of Commerce as producers. The chamber's list is used to check the Central Register's producer list. <i>Marking:</i> A sub-decree might stipulate a transitional period without producer identification until a EU-wide identification system is in place. <i>System:</i> Requirements to be defined in separate decree.
Compliance	<ul style="list-style-type: none"> ANIE, the Federation of the Electrical and Electronics Industry representing the industry in Confindustria, is preparing compliance consortia with its members, one consortium for each treatment category. Three have been established: <i>Ecolamp</i>, <i>Ecolight</i> and <i>Ecodom</i> (for large domestic appliances). Three others, for IT equipment, small appliances and air conditioners are under preparation. ANIE pointed out that the regulation as of now does not foresee an operative coordination body for the consortia. On 9 March 2005, ANIE published a compliance handbook for its members. <i>EcoR'It</i> was announced on 1 March 2005 as a consortium for the management for domestic and professional WEEE by Ecoqual'It, a voluntary consortium of Brother Office Equipment, Canon Italy, Epson Italy, Fujitsu Italy, Lanier Italy, Lexmark International, Nec Computers Italy, Nrg Italy, Oki Systems, Ricoh Italy, TallyGenicom, Toshiba Tec Italy, Toshiba Europe, Secondary Centre in Italy.

Overview of National Legislative Situation

Country	LATVIA
Transposition	<ul style="list-style-type: none"> The WEEE Directive is being transposed in several texts: <ul style="list-style-type: none"> Law on Waste Management, as amended 19 February 2004 and 2 December 2004; Amendment to the Natural Resource Tax Law, Draft; Cabinet of Ministers regulations 624, 736, 923 and Draft on National Register; Revision of the National Waste Management Plan 2003 – 2012; Major issues remain unresolved, such as the amendment of the Natural Resource Tax Law, which will regulate the financing of WEEE. Transposition expected October 2005.
Key Provisions	<ul style="list-style-type: none"> <i>Separate Collection from households</i>: Producers are responsible for collection. Those who comply individually or collectively will be exempt from a new tax on EEE, rates to be decided October 2005. <i>Central Register</i>: State Environmental, Geological and Meteorological Agency to be responsible, mandatory registration of producers; procedure not yet defined. <i>Tax on EEE</i>: The amount of tax has not been defined yet. Industry rejected an initial proposal by the ministry to have a flat weight based tax for all EEE categories.
Compliance	<ul style="list-style-type: none"> <i>Latvia Green Elektrons (LZE)</i> was founded by the Latvian Electrical Engineering and Electronic Industry Association and LDTA and the Latvian Electronics Producers Association to act as recovery organisation of IT equipment and in negotiations to cover other categories. <i>CECED</i>: As in Lithuania, Philips, Electrolux and Whirlpool have set up a local chapter of CEDED in November in view of preparing a compliance organization.

Country	LITHUANIA
Transposition	<p>The WEEE Directive is transposed in separate texts:</p> <ul style="list-style-type: none"> • Draft <i>Law On the Amendment of the Law On Waste Management</i> was sent for ministerial approval in January 2005. Producers are lobbying Parliament against their responsibility for financing separate collection, as foreseen by the draft. • <i>Rules on Management of WEEE</i>, adopted 10 September 2004 by Order No D1-481 of the Minister of Environment transpose the selective treatment and technical requirements for treatment and storage sites. • Amendment of <i>National Strategic Waste Management Plan</i>, adopted by Government Resolution No 1252 on 5 October 2004 sets the recovery targets. • The <i>Amendment of Law on Administrative Code</i>, still under discussion, will set penalties for non-compliance.
Key Provisions	<ul style="list-style-type: none"> • <i>Collection of WEEE from households</i>: Municipalities to run collection centres. But producers responsible to achieve 4kg per capita collection target. Unless producers set up their own collection, which they may, they must accept conditions of municipalities. 1:1 mandatory take back at retailers of all sizes. • <i>Central register</i>: Responsibility of the Ministry of Environment or the Environment Agency. • <i>System</i>: Requirements to be set after adoption of law.
Compliance	<ul style="list-style-type: none"> • <i>INFOBALT</i>, one of several association of the EEE industry is inviting other groups to found a recovery organisation. • <i>CECED</i>: As in Latvia, Phillips, Electrolux and Whirlpool have set up a local chapter of CEDED in November 2004 to prepare a compliance organization. • <i>LT</i> the packaging organisation is reviewing a possible compliance scheme

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Country	LUXEMBOURG
Transposition	<ul style="list-style-type: none"> A draft <i>WEEE Regulation</i> to transpose the WEEE and RoHS Directives was approved by the Council of Ministers at the end of April 2004. The Regulation was published on 31 January 2005. It leaves details to be regulated in a <i>Covenant</i> to be signed by the Chamber of Commerce, Ministries and representatives of the Municipalities.
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE from households</i>: Municipalities to maintain collection. Details of financing, fractions collected, pick-up rules yet to be defined in new Covenant. Retailers will continue to offer 1:1 takeback free of charge. <i>Central register</i>: Producers to register with the Ministry of Environment <i>Historic Waste</i>: Based on current market share – pay as you go system. <i>Financial Guarantee</i>: Provision made for individual compliance with financial guarantee <i>B2B WEEE</i>: Producers have a responsibility for B2B WEEE placed on market post-13 August 2005. Producers responsible for pre-13 Aug 2005 WEEE if replacement purchased, otherwise End User Responsibility
Compliance	<ul style="list-style-type: none"> <i>ECOTREL</i>, set up by industry in January 2004, has 100 members representing 80% of EEE sold in Luxembourg. ECOTREL aims to utilize the existing collection and treatment infrastructure set up by the government organizations SuperFreonsKëscht and SuperDrecksKëscht, but requests that their operations are outsourced under competitive conditions. (Presently they are outsourced to one organisation only).

Country	MALTA
Transposition	<p>WEEE is covered by a number of texts:</p> <ul style="list-style-type: none"> • The <i>Eco-Contribution Act</i>, in force since 1 September 2004, enables the VAT department to charge importers a tax on WEEE. The possibility for exception is foreseen, but the conditions are not specified. • The draft <i>Waste Management (WEEE) Regulations 2004</i> were published on 22 October 2004 for consultation. They transpose the EU WEEE Directive very closely. • The Malta Environment and Planning Authority, has invited a commission of government and private sector representatives to define conditions for the exemption from the Eco-Contribution. <p>Discussion still ongoing</p>
Key Provisions	<ul style="list-style-type: none"> • <i>Household WEEE</i>: Minister will be able to exempt collective or individual compliers from an Eco Tax on EEE (full or partial based upon the recovery rates achieved) • <i>Historic Waste</i>: Based on current market share – pay as you go system • <i>Financial Guarantee</i>: Requirement for individual compliers • <i>National Register</i>: The register will be managed by the Malta Environment and Planning Authority. Timetables for registration are being developed.
Compliance	<ul style="list-style-type: none"> • Several companies have expressed interest in setting up individual and collective systems but none has been established yet. Due to the small size of Malta and high population density, individual systems for B2C EEE might be feasible. • WEEE is currently collected by WasteServ, a company established by the Government in 2003, which is planned to operate until producers set up their own systems.

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Country	NETHERLANDS
Transposition	<ul style="list-style-type: none"> The Decree and Regulation (SAS/2004072357) concerning Electrical and Electronic Equipment were adopted in July 2004. The regulations come into force on 1 January 2005 for all equipment except lighting products for which the date has been postponed to 13 August 2005.
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE from households:</i> Municipalities must provide sites where householders can return WEEE 'at least' free of charge. Retailers must take back products free of charge on a 1:1 basis. From August 2005, producers are required to take back their own brands from municipal collection sites and to meet the costs of sorting and transport. Producers may set up their own systems for recovery of WEEE. <i>Historic Waste:</i> Costs to be met through current market share on pay as you go basis <i>Financial Guarantee:</i> Required from individual compliers. Collective compliance scheme serves as guarantee. <i>B2B WEEE:</i> Producers have a responsibility for B2B WEEE placed on market post-13 August 2005. Producers responsible for pre-13 Aug 2005 WEEE if replacement purchased, otherwise End User Responsibility <i>Visible Fee:</i> Allowed until 2011 (2013 Large Appliances)
Compliance	<ul style="list-style-type: none"> NVMP system began work in 1999 and will continue to be the main compliance organisation. ICT-Milieu runs a take-back scheme for IT, telecoms and office equipment. Stichting Lightrec is responsible for the collection of commercial and household lamps and luminaires.

Country	POLAND
Transposition	<ul style="list-style-type: none"> The WEEE Directive will be transposed through an Act requiring parliamentary approval, a draft of which was adopted by government on 7 January 2005. Approval was expected September 2005
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE from households:</i> Local authorities to provide collection points. Producers to finance separate collection of an amount equal to 90% of what is place on the market. <i>Central register:</i> Responsibility of the Chief Inspector of Environmental Protection (formerly planned to be under the Chief Inspector of Trade Inspection); may be delegated to producer self-governing body. <i>Product fee</i> charged to producers which decide to not join recovery systems. The fee feeds the National Fund of Environmental Protection. <i>Visible Fee:</i> May be shown for historic waste, fee to be set by the producer or collective organisation <i>Financial Guarantee:</i> Provision made for individual compliance.
Compliance	<ul style="list-style-type: none"> CECED is inviting founding members to form a joint organisation. In cooperation with KIGEiT (Polish Chamber of Electronics and Telecommunication) and Philips (lamps) CECED has mounted a strong lobbying campaign during Parliamentary phase of the Act on WEEE. So far the parliamentary committee responsible for WEEE has held five sessions. ERP is not active in the process. However, CCR, ERP's subcontractor for WEEE from i.a. Germany, is scouting recycling plants in Poland. The Polish Chamber of Electronics and Telecommunication is planning to set up a PRO for consumer electronics With the help of the European Lighting Company Federation (ELC) the "Polish Ecolamp" is planned to be set up.

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Country	PORTUGAL
Transposition	<ul style="list-style-type: none"> Decree-Law 230/2004, transposing the WEEE and RoHS Directives was adopted in September 2004 and published in the Official Bulletin on 10 December 2004
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE from households:</i> Distributors will be obliged to take back WEEE free of charge on a 1:1 basis. There will also be municipal collection points. Producers to set up collection system to collect from local authorities, distributors and other collection points. <i>Central register:</i> Registration to be carried out by a body set up by producer associations and collective compliance system, under licence from the Waste Institute. The Registry Entity - ANREEE (Associacao Nacional para o Registo de Equipamentos Electricos e Electronicos) has not yet been fully established. Six associations and two management entities make up the organisation ANREEE (AGEFE, AIMMAP, ANEMM, ANIMEE, APIRAC, APED, Amb3E and ERP Portugal). A bilingual registration system should be ready and available in the beginning of 2006. <i>Historical waste:</i> Historical WEEE shall be funded by producers according to their market share at the time the WEEE is collected. <i>Financial Guarantee:</i> Provision is made for individual company compliance on the basis of a financial guarantee <i>B2B Producers:</i> Are responsible for WEEE put on market after Aug 13 2005 and for historic WEEE where a replacement is purchased.
Compliance	<ul style="list-style-type: none"> Industry is setting up an organisation to be called Amb3E ERP have also established a collective compliance scheme

Country	SLOVAKIA
Transposition	<ul style="list-style-type: none"> • The WEEE and RoHS Directives will be transposed in several texts of which the most import are: <ul style="list-style-type: none"> ○ The <i>Amendment to the Waste Act</i> of 2001 defining producer responsibility for WEEE and implementing the RoHS Directive, adopted on 6 December 2004. ○ A new <i>Governmental Order</i> will set the WEEE recovery targets. ○ A new <i>Ministerial Order</i> will transpose provisions relating to marking, treatment and storage. Both orders are expected to be approved around April 2005. ○ Order on Contributions to the Recycling Fund, last amended by Ministerial Order No. 127/2004 • A “Recycling Fund” was set up in 2001 and manufacturers are obliged to pay product fee (not all WEEE categories are included) which is used for financing relevant recycling activities and the development of infrastructure. Manufacturers may set up their own recycling infrastructure (and get exemption in this way)
Key Provisions	<ul style="list-style-type: none"> • <i>Collection of WEEE from households:</i> The Waste Act makes producers responsible for setting up and financing separate collection. 1:1 take back is mandatory for retailers if they are the producers (otherwise voluntary take back) • <i>Central Register:</i> Responsibility of the Ministry of Environment who will probably entrust the Environment Agency with creation of the register. Mandatory registration of producers. • <i>Product fee:</i> Since early 2003 there are fees on EEE that feed the semi private recycling fund. Exemption mechanisms will apply for producers that join a recovery organisation. • <i>Visible Fee:</i> Visible fee allowed until 2011 (2013 for large appliances). Envindom members have chosen to display.
Compliance	<ul style="list-style-type: none"> • CECED to set up a joint system for Slovakia and the Czech Republic. • Ekolamp (Category 5) • Envindom (Category 1,2) • SEWA (Categories 3,4)

Overview of National Legislative Situation

Country	SLOVENIA
Transposition	<ul style="list-style-type: none"> • With only 8,000 tons of WEEE per year expected, Slovenia decided to tender out WEEE management. On 4 November 2004, a set of regulations were published to that effect: <ul style="list-style-type: none"> ◦ WEEE Ordinance transposes i.a. the RoHS Directive. ◦ A Decree on the Conditions for Performing Public Utility Service of WEEE Management defines criteria for tender participants. ◦ An Eco Fee Decree introducing fees payable at the point of sale for the 10 EEE categories. • The legislation has been called back and will be modified. Its key element was to give the collection and recovery of WEEE to concession to a single PRO (small country). The criteria set for the tender could have only been met by Gorenje, the well known Slovenian appliance manufacturer. This approach (monopoly) was highly contested by the other stakeholders. The modified legislation now will allow the set up of more collection schemes. The new act is expected to be published by end of May and the deadline for registration, which is already enforced is also the end of May • Retailers are already obliged to pay eco product fee for goods put on the market. This system will be kept, but producers meeting the targets of the WEEE Directive will get exemption from the product fee.
Key Provisions	<ul style="list-style-type: none"> • Two tenders – one for the management of household and one for non-household WEEE - are expected to be published in early 2005, with bids to be returned within 45 days. • Applicants need to be producers or their representatives, have a network of facilities for take-back of WEEE, have a market share of at least 33% of local EEE production, of which at least 33% needs to be sold in Slovenia and have an existing permit for collection and treatment. • The amount of the Eco fee will be set by the Minister of Environment, taking into account the costs specified in the winning proposal.
Compliance	<ul style="list-style-type: none"> • So far, Gorenje, a large local EEE producer, and a consortium of foreign manufacturers meet the tender requirements. • A consortium of three recycling companies, lead by Blok d.o.o. is planning to set up a collection scheme for all categories of WEEE. • Both parties are waiting for the final legislation.

Country	SPAIN
Transposition	<ul style="list-style-type: none"> Royal Decree 208/2005 on Electrical and Electronic Equipment and its waste was adopted on 25 February 2005. The final decree contains some addition clauses to the previous draft, which cover provisions for a register of producers and for financing historical waste (i.e. products placed on the market before 13 August 2005). Local authorities will be responsible for collecting WEEE from households and storing it until it is collected for sorting and treatment by producers or their collective organisation. Unlike some Member States whose legislative timetable has fallen behind schedule, Spain has not delayed the 13 August 2005 date of entry into force, despite industry's fears that the register of producers will not be ready by then.
Key Provisions	<ul style="list-style-type: none"> <i>Collection of WEEE</i> from households: Producers will be responsible for collecting and recycling all products they place on the market after 13 August 2005. For products placed on the market before that date, producers will be responsible for products in proportion to their market share. <i>Register of producers</i> provided for in Royal Decree 208/2005 –As requested by producers there will be one national register rather than each Autonomous Region having its own. The registering authority is the National Register of Industrial Establishments, which according to Spanish officials, is expected to be up and running before August 13th. At the moment, there is no contact information for the National Register. <i>Takeback system</i>: In most cases, the returning of goods will be at no cost to the product's final owner. There are several manners in which to dispose of WEEE. The consumer may return the WEEE to a distributor from whom they are buying an equivalent or replacement product, or may drop them off at an authorized location. A distributor must receive the item and store it until it can be processed correctly, by means of scheduled collections by the item's producer or their representative organisation. Local authorities, in municipalities with more than 5000 people, will also be responsible for collecting WEEE from households and storing it until it is collected for sorting and treatment by producers or their collective organization. A municipality with less than 5000 people will adhere to the collection standards set by the respective autonomy. In cases where the above methods of disposal would prove to be a sanitary or security risk, the product's final owner will be responsible for the correct processing of the WEEE. In most cases, the WEEE producer will bear the cost and responsibility of the collection, treatment, and final disposal of the item.
Compliance	<ul style="list-style-type: none"> Producers may fulfil their WEEE management, collection and treatment, obligations individually or through a collective scheme. Regional authorities, in the region in which the company operates, must authorize the collective schemes. The applications for authorization must include the territorial scope, the name and addresses of the organization which will be managing the operation, the points of collection and the manager of each, the means of financing the project, and the procedures for providing information to public authorities. The authorizations will then be granted for a five-year period, on a renewable basis. The ECOLEC Foundation has been created as a collective management system set up by the business associations that represent the manufacturing sector and importers of large and small electrical appliances. Tragamovil, (Mobile Phones) Ecofimatica (reprographics) and Ecoasimelec have been set up by the sociaci3n Multisectorial de Empresas Espa1olas de Electr3nica y Comunicaciones SIG Lamparas (Lamps and Lighting Equipment) ECOTIC (Consumer Electronics)

Overview of National Legislative Situation

Country	SWEDEN
Transposition	<ul style="list-style-type: none"> • The Swedish Ordinance (2005:209) on Producer Responsibility for Electrical and Electronic Products was adopted on 14 April 2005 and comes into force on 13 August 2005. The Swedish Environmental Protection Agency has issued new regulations (2005:10) on professional pre-treatment of waste consisting of electrical or electronic products. The regulations contain provisions on how all electrical waste is to be treated, not just electrical waste which is to be subject to producer responsibility. • The changes to producer responsibility legislation mean that more equipment is covered and the responsibility of producers is expanded. The requirements relating to supervision and checking become considerably more stringent as all producers have to repeatedly describe how they fulfil their responsibility under the Ordinance. In addition, the Swedish EPA has powers to levy environmental penalty charges in the event of inadequate reporting. As a WEEE recovery system is already in place, the main changes will be the introduction of the register and the financial guarantee.
Key Provisions	<ul style="list-style-type: none"> • <i>Collection of WEEE from households:</i> Local municipalities are responsible for the collection of Consumer WEEE that has not been returned to a producers' collection system. Producers to organize collection from municipal sites. Producers and municipalities may reach agreements on the most appropriate methods for collection • <i>Registration:</i> Registration is expected in early 2006. The registration body will be the EPA (Environment Protection Agency) • <i>Financial Guarantee.</i> The Swedish legislation allows for a financial guarantee in case of individual compliance only. • <i>B2B:</i> Producers to finance take back for products put on market post Aug 2005, and for historic waste if replacement is bought. • <i>Historic waste:</i> producers to share financial responsibility for historic waste in proportion to current market share.
Compliance	<ul style="list-style-type: none"> • El-Kretsen is the service company taking responsibility for producers' obligations. El-Retur is the name of the system jointly run by El-Kretsen and the local authorities for collection.

Country	UNITED KINGDOM
Transposition	<ul style="list-style-type: none"> • WEEE: Registration is an issue currently under consultation by the DTI, but it has been agreed that registration and enforcement of WEEE will be managed by the Environment Agency (England & Wales); Scottish Environment Protection Agency (SEPA); and the Northern Ireland Environment & Heritage Service. DTI is currently consulting on the fees that will be payable. The Department for the Environment, Food and Rural Affairs (DEFRA) will be involved in developing guidance on how to comply with the regulations. • Regulations to transpose the WEEE Directive, together with non-statutory Guidance, were published in 'summer' 2005. It is now envisaged that producer obligations for both business and consumer WEEE will commence in June 2006. DTI regulations are being finalized and are expected to be complete by the end of November. Producers will have to register in January and February with a deadline set for the end of February. • A consultation is expected shortly on draft regulations for the permitting of WEEE treatment facilities. It is intended that these regulations will be adopted in time for facilities to be permitted before implementation of the producer responsibility obligations.
Key Provisions	<ul style="list-style-type: none"> • <i>Registration:</i> Environment Agency in England and Wales, SEPA in Scotland and NI EHS in Northern Ireland. Registration is expected to take place in Jan/Feb-06. • <i>Clearing house:</i> Responses to the Government Consultation showed wide support for a national Clearing House to organise producer responsibility. Several respondents supported proposals to allow individual producer responsibility. The initial idea of an independent Clearing House has been changed and responsibilities will now be taken on by the Department of Trade and industry and the Environment Agencies. <ul style="list-style-type: none"> ○ The DTI will allocate WEEE to producers based on their market share ○ The Environment Agencies will register and monitor obligated producers. • <i>Registration:</i> Companies can register directly with EA, SEPA, NIEHS or via a compliance "scheme" or consortium such as the British Retail Consortium. The EA expects that most producers will use such schemes, and therefore estimate about 20,000 registrations. There are plans for a variety of registration methods eventually to be available (via the Internet for example), but a paper system is very likely for the first registrations.
Compliance	<ul style="list-style-type: none"> • Several waste companies (Onyx, Valpak, Wastepack) have set up pre-compliance schemes. Other groups (Gambica, Repic) have been formed by producers.

ANNEXES

ANNEX A. Invitation to Seminar

21 July 2005
Reference Inv. 1

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EUROPEAN COMMISSION – INVITATION TO WEEE DIRECTIVE SEMINAR

attend a one-day seminar to review implementation of the WEEE Directive in the EU 25. The Seminar will be held at the offices of the Commission in Brussels on 15th September 2005.

The Seminar will present the draft results of a research study undertaken by AEA Technology on behalf of the European Commission in which you have participated. These will include:

- Evaluation of the regulatory approaches in the EU 25 in relation to the 2002/96/EC Directive.
- Identification and analysis of national WEEE management schemes in the EU 25.
- Identification and analysis of commercial WEEE initiatives at national and European level.

The results of the seminar will allow the Commission better to assess the main environmental and economic benefits derived from the implementation of the WEEE Directive, the main problems encountered in the implementation of this Directive as well as possible measures to overcome them.

A schedule for the day's events will be forwarded to you nearer the time. AEA Technology will cover costs of travelling to Brussels for the Event.

I shall contact you shortly to confirm your participation.

Yours sincerely

Matthew Savage
Principal Consultant
AEA Technology

ANNEX B. SEMINAR RUNNING ORDER

Review of WEEE Directive implementation

A Seminar organised by AEA Technology/REC for the European Commission

Date: 15th September
 Location: DM24 - Rue Demot, 24: Room 073.
 European Commission, Brussels
 Time: 9.30 am – 5.00 pm

Preliminary Running Order

09.30	Introduction	Overview of Research Project by Consultants and EC
09.45	Current Status in EU Member States	Transposition and compliance scheme implementation in EU 25, pre-Directive situation, readiness, patterns
10.45	Coffee	
11.00	Directive: Strengths and Weaknesses	Unresolved issues, clarifications, legal position, scope for interpretation.
11.45	Issues of Transposition and Implementation	National consultation processes, transposition issues, roles and responsibilities, delays and derogation, role of TAC/EC
12.30	Lunch	
1.30	National Approaches	Single national system vs. market based approach, pan-EU initiatives, national infrastructure, country drivers
2.15	Financing Issues	Municipalities and retailers, financial guarantee, visible fee and historic waste, b2b
3.00	Coffee	
3.15	Enforcement and Equity	Role of government, operation of registries, free-riders, penalties, auditing.
4.00	Future Developments	Harmonisation, Best Practice and WEEE Forum, EU Registry, 2008 Review, IPR, Accession
4.45	Wrap up	

The day will begin with a review of the legislative and operational review of implementation across the EU 25. Each following session will begin with a 5-minute presentation by the consultants outlining the main findings of the research process. The group will then be asked to discuss the relevance of each of the issues to successful implementation of the Directive and potential solutions to ensure effective compliance across the EU.

European Commission

EUR 22231 EN – DG Joint Research Centre, Institute for Prospective Technological Studies

Title: Implementation of Waste Electric and Electronic Equipment Directive in EU 25

Authors: Matthew Savage, Steve Ogilvie, Jozsef Slezak, Eniko Artim, Josefina Lindblom (ed.), Luis Delgado (ed.)

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Abstract

Electrical and Electronic Equipment (EEE) includes substances that may cause serious damage to the environment and have adverse effects on human health so it is essential to manage the waste (WEEE) resulting from EEE in a proper way. The Directive 2002/96/EC on WEEE seeks to reduce the environmental impacts of WEEE. The Commissions foresees that out a review of the WEEE Directive will be carried out in 2008. The report identifies and describes regulatory and management approaches considering WEEE at worldwide level. It outlines key trends and describes the main benefits and problems in the implementation of the WEE Directive. The report identifies opportunities for harmonisation and improvement in the way the Directive is being implemented across Member States.

The mission of the JRC is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.