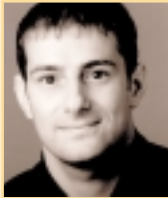


## Reversing into profit



**Two imminent pieces of Europe-wide environmental legislation could provide the chance to simultaneously reduce costs and raise revenues.**

By Jonathan Wright

Are European businesses about to miss one of the most profitable opportunities in recent years? The signs point to just such an eventuality. But

by regarding two imminent pieces of Europe-wide environmental legislation as precisely that – environmental legislation – they are closing their eyes to a chance to simultaneously reduce costs and raise revenues, while avoiding levies on pollution and waste disposal.

The two pieces of legislation in question are the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive (the 'RoHS Directive'), and the Waste Electrical and Electronic Equipment Directive ('WEEE Directive'). Promulgated by Brussels over a ten-year gestation period, these directives place strict new requirements on the substances that can be used in the manufacture of electrical and electronic equipment – and on how such equipment must be disposed of at the end of its life.

From an overall corporate perspective, both directives have enormous implications. And implications, what's more, that are truly global. Simply put, the RoHS Directive means that product designers as far apart as Stockholm, San José and Singapore will have to make sure that the components and devices they are building into products do not contain substances prohibited by Europe. Otherwise, from July 1st 2006, they cannot be sold within the European Union. Period.

From a supply chain perspective, the RoHS Directive is seeing long-established sourcing arrangements disrupted by the need to seek out alternative materials and components. And not just for newly-launched, newly-designed products. If it's for sale – irrespective of when it was designed, or launched – then it cannot contain prohibited substances. So for manufacturers, the result is a quandary: are they to design a global product, as now – or design two products, one for sale in Europe, and one for sale in the rest of the world?

### End-of-life responsibility

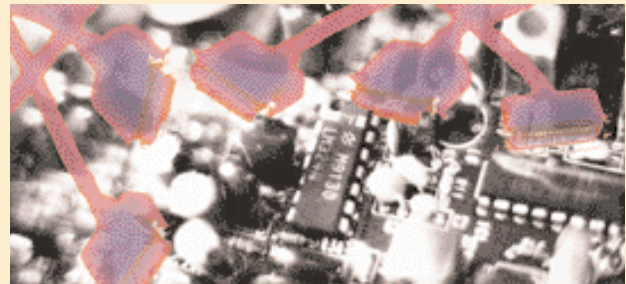
But by far the more significant source of disturbance to the supply chain comes from the WEEE Directive. Simply put, this requires manufacturers of electrical and electronic equipment sold in Europe after August 13th 2005 to be responsible for its end-of-life environmental disposal. From an overall corporate perspective, it's hard to quibble. As good corporate citizens, environmentally-safe disposal naturally seems a responsible course of action – quite apart, of course, from the fact that the law now mandates it.

But the trouble is, however laudable the intentions, the cost of compliance will be high. Reverse logistics is for many companies something of a nightmare already: the complications of dealing with warranty returns, repairs, and mis-ordered items already consumes a disproportionate amount of management time and cost. Indeed, analyses have shown that the cost of moving goods backwards through a distribution system intended for forwards flow is three to four times higher. Now imagine how supply chains must cope when retailers will be obliged to offer to take back consumers' old items, when selling them a new one.

For the product manufacturer the WEEE Directive requires that manufacturers of products bearing their brand names pay for the collection, treatment, recycling, recovery and disposal of the equipment.

The WEEE Directive lays down strict targets in order to minimise the quantity of electrical and electronic goods ending up as landfill. Taking items back, and then dumping them, isn't an option: instead, the EU expects to see 4kg of eligible equipment collected per country resident, per year, of which at least 70-80 per cent by weight must be recovered, with 50-75 per cent by weight being actively recycled.

To date, many manufacturers seem to have responded to the WEEE Directive by acquiescing with the 'default option' envisaged by many member states. Whereby the actual process of collection, treatment and recovery would be managed by local authorities, in much the same way as waste disposal and non-electrical recycling is carried out now. Through this method, materials capable of being recycled may be sold on the open market, and remaining materials earmarked for environmentally-safe disposal. Who will pay? In the short term, the manufacturer, from a bill submitted by the local authority. But, in the longer term, the consumer, through price rises.



But is this the most cost-effective way in which manufactures can comply with WEEE Directive requirements? Possibly not. Who, for example, has the greatest incentive to operate their recovery and recycling process in the most efficient manner: a municipal authority, which can pass the costs on to a third-party, or the individual manufacturer in question, where efficiencies can be managed with the same watchful eye as in the manufacturers' own factories?

And what of economies of scale? Is it more efficient for, say, a particular manufacturer's mobile phones and TVs to be processed separately at hundreds of treatment points around Europe, or centrally, at a few 'super-hubs'? In fact, a little thought reveals other advantages. Taking one's own products apart for recycling offers an alternative to just grinding components up for melting down: many components can be recovered for use as components, either going back to the production line, or as a source for aftersales servicing.

The trouble is that while such an objective is attractive, the means of gaining it seem burdensome. Complying with the WEEE Directive on this basis will be an administrative chore fraught with difficulty.

But not if the task were to be outsourced, perhaps to a team of specialised players: one to handle the logistics of collection, one to handle disassembly, another to extract the maximum revenues from recovered materials and components, and another to deal with waste treatment. Not necessarily on behalf of a single manufacturer, but perhaps for a consortium of manufacturers – or even retailers. To manage such a chain of disparate specialists, of course, will require another set of skills. Indeed, supply chain integrators with experience of managing multiple operations and relationships, may well play a pivotal role. It's a different way of working, certainly. But then, the WEEE Directive is a very different piece of legislation.

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