



Ranking criteria explained

The ranking criteria reflect the demands of the Toxic Tech campaign to the electronics companies. Our two demands are that companies should:

- clean up their products by eliminating hazardous substances;
- takeback and recycle their products responsibly once they become obsolete.

The two issues are connected. The use of harmful chemicals in electronics prevents their safe recycling when the products are discarded. Companies scored marks out of 30 this has then been calculated to a mark out of 10 for simplicity.

Toxic chemicals criteria

Greenpeace wants to see electronics companies clean up their act.

Substituting harmful chemicals in the production of electronics will prevent worker exposure to these substances and contamination of communities that neighbour production facilities. Eliminating harmful substances will also prevent leaching/off-gassing of chemicals like brominated flame retardants (BFR) during use, and enable electronic scrap to be safely recycled. The presence of toxic substances in electronics perpetuates the toxic cycle – during reprocessing of electronic waste and by using contaminated secondary materials to make new products.

Until the use of toxic substances is eliminated, it is impossible to secure 'safe' recycling. For this reason, the points awarded to corporate practice on chemicals (five criteria, double points for PVC – and BFR-free models) are weighted more heavily than criteria on recycling, because until the use of harmful substances is eliminated in products, it is impossible to secure 'safe', toxic-free recycling.

The electronics scorecard ranks companies on:

Chemicals policy and practice (5 criteria)

1. A chemicals policy based on the Precautionary Principle
2. Chemicals Management: supply chain management of chemicals via e.g. banned/restricted substance lists, policy to identify problematic substances for future elimination/substitution
3. Timeline for phasing out all use of vinyl plastic (PVC)
4. Timeline for phasing out all use of brominated flame retardants (not just those banned by EU's RoHS Directive)
5. PVC- and BFR-free models of electronic products on the market.

Policy and practice on Producer Responsibility for taking back their discarded products and recycling (4 criteria)

1. Support for individual (financial) producer responsibility – that producers finance the end-of-life management of their products, by taking back and reusing/recycling their own-brand discarded products.
2. Provides voluntary takeback and recycling in every country where it sells its products, even in the absence of national laws requiring Producer Responsibility for electronic waste.
3. Provides clear information for individual customers on takeback and recycling services in all countries where there are sales of its products.
4. Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled.

Click here to see more detailed information on the ranking

Ranking regrading: Companies have the opportunity to move towards a greener ranking as the guide will be updated every quarter. However penalty points will be deducted from overall scores if Greenpeace finds a company lying, practising double standards or other corporate misconduct.

Disclaimer: Greenpeace's 'Guide to Greener Electronics' aims to clean up the electronics sector and get manufacturers to take responsibility for the full life cycle of their products, including the electronic waste that their products generate. The guide does not rank companies on labour standards, energy use or any other issues, but recognises that these are important in the production and use of electronics products.

For the latest version [greenpeace.org/greenelectronics](https://www.greenpeace.org/greenelectronics)

LENOVO Ranking = 1.3/10

Lenovo is in bottom position. Although Lenovo earns points for chemicals management and providing some voluntary product take back programmes, it needs to do better on all criteria.

LENOVO Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

LENOVO Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle	No reference to the precautionary principle.			
Chemicals Management			Lenovo uses IBM specifications, but no information on the specs are implemented. More info	
Timeline for PVC phaseout	No commitment to phase out all PVC			
Timeline for BFR phaseout	No commitment to phase out all BFRs			
PVC-free and/or BFR-free models (companies score double on this criterion)	No PVC-free or BFR-free models on the market			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to individual producer responsibility			
Provides voluntary takeback where no EPR laws exist		Voluntary takeback does not cover all countries and in many, takeback services are primarily for business customers, not individual consumers. Product recycling programs Includes Australia, US, NZ but Asset Recovery service primarily for business customers. Service for takeback from individual customers Product recycling programs Also for Canada:		
Provides info for individual customers on takeback in all countries where products are sold		Information on takeback tailored to business customers rather than individual consumers, Contacts for business (5 Jul 06) For US individual customers For individual customers Canada: Contact (5 Jul 06) Info for European customers		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No information on amounts of e-waste recycled.			

MOTOROLA Ranking = 1.7/10

Although Motorola scores points for its chemicals management system, it recently backtracked on its commitment to eliminate polyvinyl chloride (PVC) and brominated flame retardants (BFRs). The company also scores poorly on product take back and recycling.

MOTOROLA Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

MOTOROLA Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle	No reference to the precautionary principle			
Chemicals Management				Motorola provides a list of chemicals banned and reportable substances in its Global Common Specification No. 12G02897W18. More information Training and resources provided to suppliers
Timeline for PVC phaseout	No commitment to eliminating PVC			
Timeline for BFR phaseout	No commitment to eliminating BFRs			
PVC-free and/or BFR-free models (companies score double on this criterion)	No BFR-free or PVC-free products on the market.			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to supporting individual producer responsibility			
Provides voluntary takeback where no EPR laws exist		Motorola only provides voluntary takeback in US, UK and is part of the Green Box scheme in China Green Box scheme Green Box scheme		
Provides info for individual customers on takeback in all countries where products are sold		Motorola provides information to individual customers only in US, UK and China. Information More information		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No information on amounts of WEEE collected and recycled.			

ACER Ranking = 2.3/10

Despite Acer's adoption of the precautionary principle, the company has yet to provide timelines for the elimination of polyvinyl chloride (PVC) and brominated flame retardants (BFRs). The company scores no points on product take back and recycling.

ACER Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

ACER Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Acer scores a 'yes' on its statement on the precautionary principle that recognises the need for preventive action, even if scientific evidence is not conclusive. Precautionary principle
Chemicals Management			Acer loses a point because its Hazardous Substance List fails to provide a system for identifying future harmful chemicals for elimination. 2006 Environmental Objectives Acer's Hazardous Substance List	
Timeline for PVC phaseout		Acer has committed to providing a substitution plan for eliminating PVC by the third quarter of 2006. Timeline		
Timeline for BFR phaseout		Acer has committed to providing a substitution plan for eliminating all BFRs by the third quarter of 2006. Timeline		
PVC-free and/or BFR-free models (companies score double on this criterion)	No PVC-free or BFR-free models on the market Product environmental management			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to individual producer responsibility			
Provides voluntary takeback where no EPR laws exist	Acer only provides takeback services where required to do so by national EPR laws. Easy Disassembly and Product Recycling			
Provides info for individual customers on takeback in all countries where products are sold	No information to individual customers on what to do with their discarded Acer products.			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No information on the amounts of e-waste collected and recycled.			

APPLE Ranking = 2.7/10

For a company that claims to lead on product design, Apple scores badly on almost all criteria. The company fails to embrace the precautionary principle, withholds its full list of regulated substances and provides no timelines for eliminating toxic polyvinyl chloride (PVC) and no commitment to phasing out all uses of brominated flame retardants (BFRs). Apple performs poorly on product take back and recycling, with the exception of reporting on the amounts of its electronic waste recycled.

APPLE Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

APPLE Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle		Definition of precautionary principle reflects poor understanding of this principle in chemical policy. More information		
Chemicals Management		Apple provides only examples of substances that are on its Regulated Substances Specification 069-0135, but the Spec itself is not publicly available. Read information		
Timeline for PVC phaseout		Although Apple commits to eliminating PVC, there is no timeline for complete phase out. More information		
Timeline for BFR phaseout	Although Apple commits to eliminating all BFRs, there is no timeline for complete phase out. More information			
PVC-free and/or BFR-free models (companies score double on this criterion)	No PVC-free or BFR-free product systems. Apple only lists some PVC-free peripherals on its website.			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility		<p>Apple refers to its “individually responsible approach” to recycling through its own takeback initiatives and national collective take-back programmes. The definition of IPR needs to be more explicit.</p> <p>More information</p>		
Provides voluntary takeback where no EPR laws exist		<p>No voluntary takeback for every country where Apple has sales of its products and not for every type of product. Information</p>		
Provides info for individual customers on takeback in all countries where products are sold		<p>No information in every country where sales of products, not even in every country with EPR laws. Apple recycling program Information for EU, Japan and Taiwan (EPR laws)</p>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			<p>Apple reports on amounts recycled based on weight and not percentage of sales. On the positive side, Apple acknowledges importance of responsible recycling i.e. no export of collected e-waste and bans recovery of plastics in smelters. Apple and the environment</p>	

TOSHIBA Ranking = 3/10

Despite some models of laptops produced without brominated flame retardants (BFRs) and EcoMark-certified products without polyvinyl chloride (PVC), Toshiba has not committed to eliminating all uses of PVC and BFRs. The company also loses points on product take back and recycling.

TOSHIBA Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

TOSHIBA Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle		Mention of precautionary approach only with reference to the Global Compact. More information		
Chemicals Management				Toshiba has Green Procurement Guidelines for suppliers and ranks suppliers. More information
Timeline for PVC phaseout	No commitment to eliminating all PVC			
Timeline for BFR phaseout	No commitment to eliminating all BFRs			
PVC-free and/or BFR-free models (companies score double on this criterion)		Toshiba make a range of notebook PCs including the 'Dynabook', 'Satellite', 'Tecra' and 'Portege' models which have circuit boards free of halogens and antimony. Toshiba also make EcoMark-certified products, some of which do not contain PVC. More information Green procurement		

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to Toshiba's support for individual producer responsibility.			
Provides voluntary takeback where no EPR laws exist		Toshiba claim to be establishing voluntary takeback and recycling systems in North America, China and elsewhere in the world. More information Recycling Toshiba trade-in program		
Provides info for individual customers on takeback in all countries where products are sold	No information for individual customers on what to do with their discarded Toshiba products.			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			Toshiba provides information on recycling of home appliances and PCs in Japan, but only in Japan. More information Increasing the Amount of End-of-Use Products Recycled Also information	

FUJITSU-SIEMENS Ranking = 3/10

Fujitsu-Siemens Computers earn points for having some models free of the worst chemicals. But the company loses points for failing to disclose the chemicals it uses in its products and not committing to the complete elimination of polyvinyl chloride (PVC) and brominated flame retardants (BFRs). Fujitsu-Siemens is generally poor on product take back, but does provide information on recycling.

FUJITSU-SIEMENS Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

FUJITSU-SIEMENS Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle		Despite a webpage dedicated to the precautionary principle, there is no definition of what implementing the precautionary principle means in practice for FSC. More information		
Chemicals Management	Although reference is made to FSC 03230 Guidelines on Product Design & Development, the spec is not available on the website. More information			
Timeline for PVC phaseout	No commitment to complete elimination of PVC, although there is a current project to determine to what extent PVC-free external cables can be introduced in 2007. More information			
Timeline for BFR phaseout	FSC has eliminated BFRs in housings and other mechanical parts, as well as reduced halogens in circuit boards, there is no commitment to the complete phase out of BFRs. More information			
PVC-free and/or BFR-free models (companies score double on this criterion)			FSC has a range of “Green PCs” that use halogen-free flame retarded plastics and halogen-free circuit boards. More information Press release (26May 06) Press release (12Jul 05)	

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	FSC has no statement in support of individual producer responsibility			
Provides voluntary takeback where no EPR laws exist		FSC only provides takeback where there are EPR laws. No voluntary takeback in the Middle East or in Africa where FSC has sales of its products. More information Info in German Environmental care		
Provides info for individual customers on takeback in all countries where products are sold		Information for individual customers only in countries with EPR laws, namely EU, Switzerland and Norway. More information		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			Information about recycling in FSC's recycling centre where the company claims a recycling rate of 98%, as opposed to WEEE Directive's target of 75%. But, data provided only for the one recycling centre. More information More info in German	

PANASONIC Ranking = 3.3/10

Despite very comprehensive web pages on chemicals management and the elimination of polyvinyl chloride (PVC) in some applications, Panasonic scores poorly on all the other criteria: failure to embrace the precautionary principle; no commitment to eliminating brominated flame retardants (BFRs), no support for Individual Producer Responsibility and poor information on product take back and recycling.

PANASONIC Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

PANASONIC Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle		Panasonic's reference to precautionary principle is misleading as it includes risk management systems. More information		
Chemicals Management				Panasonic's web pages on chemicals management contain a lot of detailed of information. Managed substances include: antimony, beryllium, bismuth and phthalate esters. More information May 16, 2006 "Chemical Substances Management rank guidelines Ver.4 for products" and "Green Procurement Standards Manual Ver.4 were issued. More info Chemical Substances Management Rank Guidelines for Factories Chemicals substituted Info about RoHS compliance component by component
Timeline for PVC phaseout		Some uses of PVC have already been substituted, but there is no timeline for complete elimination of PVC. More information More info PVC substitution		
Timeline for BFR phaseout	BFRs are only 'managed substances' and there is no commitment for their elimination in Panasonic products.			
PVC-free and/or BFR-free models (companies score double on this criterion)		Panasonic provides examples of PVC-free substitutes, including power cords, internal wiring & connecting cords. More information		

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to extended producer responsibility or individual producer responsibility.			
Provides voluntary takeback where no EPR laws exist		<p>Voluntary takeback programmes are not worldwide and do not cover all Panasonic's product groups, mainly mobiles and toner cartridges.</p> <p>US recycling activities More info For Australia: Mobiles Cartridges Toner cartridges in Europe, US, Japan More info Also info China Mobiles: Green Box Scheme (Chinese) Green Box Scheme (Chinese) News about Green Box (Chinese) News about Green Box (Chinese) Mobiles in Japan</p>		
Provides info for individual customers on takeback in all countries where products are sold		<p>Information to customers is available in European countries with EPR laws and for batteries and toner cartridges in US.</p> <p>More information Also information</p>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		<p>Panasonic provides data on home appliances and PCs recycled in Japan.</p> <p>More information Overview of home-use PC recycling system Overview of Recycling for Specified Home Appliances Examples of "recycling"</p>		

LG ELECTRONICS Ranking = 4.3/10

LGE earns points for supporting the precautionary principle and Individual Producer Responsibility. The company also scores points for providing timelines for substituting toxic polyvinyl chloride (PVC) and brominated flame retardants (BFRs), but loses points on product take back and recycling.

LG ELECTRONICS Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

LG ELECTRONICS Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				LGE provides a strong definition of the precautionary principle reflecting the need to take action to eliminate harmful chemicals even though their effects may not be scientifically proven. More information
Chemicals Management			LGE provides a substance list that includes future substances to be reduced, including beryllium and antimony. More information	
Timeline for PVC phaseout			The first PVC-free products are to be launched in 2008; the remaining uses of PVC are to be phased out by the end of 2010. More information	
Timeline for BFR phaseout			All new models released in 2010 are to be BFR-free. More information	
PVC-free and/or BFR-free models (companies score double on this criterion)	No BFR-free or PVC-free product systems on the market.			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				LGE supports individual producer responsibility (IPR) while acknowledging the barriers to implementing IPR. More information
Provides voluntary takeback where no EPR laws exist	No information about LGE's voluntary takeback programmes on their website.			
Provides info for individual customers on takeback in all countries where products are sold	No information on what customers can do with their discarded LGE e-waste			
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		LGE provides information on their recycling rates only in Japan and Korea. More information		

SONY Ranking = 4.7/10

Despite having some models without the worst chemicals, Sony has yet to provide timelines for substituting toxic polyvinyl chloride (PVC) and brominated flame retardants (BFRs) for key applications. Sony's website makes no reference to the precautionary principle. Although Sony is part of the European Recycling Platform which supports Individual Producer Responsibility, Sony's website provides no explicit support for worldwide Individual Producer Responsibility.

SONY Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

SONY Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle	No reference to the precautionary principle More information			
Chemicals Management				Information on SS-00259 (5th edition, Feb 2006) Management Regulations and Green Partner programme to ensure implementation of the Regulations Chemicals Management Green Partner auditing
Timeline for PVC phaseout		Sony has already phased out some applications of PVC, but no timelines on some applications and many exemptions. More information at: SS-00259 CSR Report 2005		
Timeline for BFR phaseout		Some applications of BFRs already phased out, but no timelines for applications such as circuit boards. More information		
PVC-free and/or BFR-free models (companies score double on this criterion)			Sony has a range of environmentally-conscious products and "Eco-Info" mark products which are free of BFRs in housings and circuit boards. Sony is also reducing use of PVC in some applications More information Reducing PVC Usage	

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility		<p>Sony refers to Extended Producer Responsibility and is a founding member of the European Recycling Platform which supports individual producer responsibility.</p> <p>More information European recycling platform</p>		
Provides voluntary takeback where no EPR laws exist		<p>Sony provides voluntary takeback in North America and Japan, as well as takeback of batteries in Taiwan and Australia.</p> <p>More information Voluntary takeback of batteries in Taiwan Voluntary takeback of batteries in Australia</p>		
Provides info for individual customers on takeback in all countries where products are sold		<p>Sony provides information for individual consumers (for PC monitors) but only in US and gives links to websites of PROs (Producer Responsibility Organisations) in some European countries. More information</p>		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			<p>Sony reports on the amounts of WEEE and batteries collected in N. America and recycling rates for TVs and PCs in Japan. More information Figures for recycling of TVs and PCs in Japan</p>	

SAMSUNG Ranking = 5/10

Samsung gets top marks for providing a timeline for phasing out brominated flame retardants (BFRs) and for its strong support for Individual Producer Responsibility. Samsung loses points for providing voluntary product take back of its electronic waste only in a few countries and only for some product groups. The company is also weak on information to consumers on what to do with their discarded Samsung products and on reporting on the amounts of electronic-waste collected and recycled.

SAMSUNG Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

SAMSUNG Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle			Loses a point for weakening the definition of precautionary principle by failing to recognize the need to eliminate chemicals even in the face of scientific uncertainty. Samsung requires "sound scientific evidence" before taking action. Policy on target substances	
Chemicals Management			Samsung loses a point for failing to have a system for identifying future chemicals to be targeted for elimination. Identification and management of targeted substances Eco-Partner Certification Program	
Timeline for PVC phaseout			The timeline of 2011 for complete elimination of PVC is not reasonable, which is why Samsung does not score a 'yes'. Timeline	
Timeline for BFR phaseout				Samsung scores a yes for providing a timeline of 2010 for phasing out BFRs in all applications. The greening of products
PVC-free and/or BFR-free models (companies score double on this criterion)	No BFR-free or PVC-free models on the market.			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Samsung scores a yes for explicitly supporting IPR and for providing a good analysis of obstacles to implementing IPR. Take-back and recycling policy
Provides voluntary takeback where no EPR laws exist		Samsung loses points for providing voluntary takeback only in a few countries and only for some product groups. Toner cartridges Korea and EU. Part of UNEP's MPPI for mobiles – setting up in Egypt & Romania. Has been involved in pilot takeback in North America (Washington) and China (mobiles only) Domestic recycling program		
Provides info for individual customers on takeback in all countries where products are sold		Information provided to consumers only in some countries, and the quality of this information could be improved. Info for EU + Europe + US, Canada, Japan and Korea Product take-back and recycling programs		
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		Samsung reports on amounts of WEEE collected & recycled, but only in Korea and EU. Information		

SONY ERICSSON Ranking = 5.3/10

Since the start of 2006, new Sony Ericsson models are already free of brominated flame retardants (BFRs), but Sony Ericsson [they] still have to announce a timeline for substituting polyvinyl chloride (PVC). The company's website makes no reference to supporting the precautionary principle or Individual Producer Responsibility. Sony Ericsson also loses points for failing to report on the amounts of discarded mobile phones that it takes back and recycles.

SONY ERICSSON Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

SONY ERICSSON Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle	No reference to the precautionary principle			
Chemicals Management				Sony Ericsson is ahead of many companies in already making efforts to eliminate substances that others have only identified for future action. More information at: SE's List of Banned & Restricted
Timeline for PVC phaseout		A timeline for phasing out PVC is to be announced in 2006. More information		
Timeline for BFR phaseout				The phase out of BFRs in circuit boards completed already at the start of 2004 and complete phase out of all BFRs from the start of 2006. More information
PVC-free and/or BFR-free models (companies score double on this criterion)			BFR-free products are available since the start of 2006 for new models. More information	

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility	No reference to supporting individual producer responsibility.			
Provides voluntary takeback where no EPR laws exist				Voluntary takeback services provided globally product-by-product e.g. for W300: More information Also information For US consumers
Provides info for individual customers on takeback in all countries where products are sold			Voluntary takeback services provided globally product-by-product e.g. for W300: More information Also information For US consumers	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled	No information on amounts of WEEE collected and recycled.			

HP Ranking = 5.7/10

HP scores top points for providing a substitution timeline for future substances on its radar, strong support for Individual Producer Responsibility and for being the first major company to devise an electronic waste take back/recycling metric based on percent of sales.

HP loses points for failing to provide timelines for the complete elimination of toxic polyvinyl chloride (PVC) and all brominated flame retardants (BFRs). The 2007 date on HP's website is misleading. Their goal is to prepare a substitution plan for BFRs and PVC in 2007, not to eliminate these harmful substances during that year.

HP Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

HP Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle			Definition of precautionary principle does not reflect the need to eliminate potentially harmful chemicals even without full scientific certainty of harm. More information	
Chemicals Management				A substitution timeline, with substances identified by stakeholders as materials of concern helps HP score top marks on this criterion. General Specification for the Environment.
Timeline for PVC phaseout		Internal communication with HP reveals that the timeline of 2007 is in fact only to provide a substitution plan for PVC elimination. More information		
Timeline for BFR phaseout		Internal communication with HP reveals that the timeline of 2007 is in fact only to provide a substitution plan for BFR elimination. More information		
PVC-free and/or BFR-free models (companies score double on this criterion)	No BFR-free or PVC-free models on the market			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Strong and explicit support for IPR
Provides voluntary takeback where no EPR laws exist			Voluntary takeback - not for all products and not in every region of the world More information e.g. Voluntary byteback prog in Victoria, Australia China Thailand	
Provides info for individual customers on takeback in all countries where products are sold			No information for consumers in Latin America or Africa. Info on a range of options (asset recovery, donation). HP Planet Partners for many (non-EPR) countries but not all (e.g. not Latin America or Africa).	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled				The first company to devise takeback metric based on % sales . 2006 GCR reports recycling/reuse volumes were 10.3% of sales. [also reports in lbs recycled in 2005 & cumulative lbs]

DELL Ranking = 7/10

Dell's position at the joint top of this scorecard is due to its strong definition of the precautionary principle, reasonable timelines for substituting toxic polyvinyl chloride (PVC) and brominated flame retardants (BFRs) and explicit support for Individual Producer Responsibility. Dell falls down for not having models free of PVC and BFRs on the market.

DELL Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

DELL Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle				Definition of precautionary principle reflects need to eliminate potentially harmful chemicals even without full scientific certainty of cause and effect.
Chemicals Management				Dell's Restricted Materials Chemicals management Program Supplier principles and info Dell's chemicals management programme lists substances targeted for substitution and provides good description of how it manages its supply chain to achieve its substitution goals.
Timeline for PVC phaseout				Dell has committed to eliminate all remaining uses of PVC in new products by 2009.
Timeline for BFR phaseout				Dell has committed to eliminate all remaining uses of BFRs in new products by 2009.
PVC-free and/or BFR-free models (companies score double on this criterion)	No PVC-free or BFR-free products on the market.			

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Strong support for IPR and legislation embracing IPR. Policy supporting IPR The policy
Provides voluntary takeback where no EPR laws exist			Voluntary takeback to be global by November 2006 See information Currently EU, now US and globally from Nov 06 Links to Australia, Europe, Malaysia, New Zealand, Singapore, Canada	
Provides info for individual customers on takeback in all countries where products are sold			Information to consumers, but not yet worldwide: Dell Recycling Program Asset Recovery Service Canada at: Dell Recycling Also New Zealand and Australia as well as US	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled			Provides metrics for product recycling & reuse globally but based on weight – not as % sales, although this is acknowledged as a challenge for future. See information See information See information	

NOKIA Ranking = 7/10

Nokia leads the way on eliminating toxic chemicals. Since the end of 2005 all new models of mobiles are free of polyvinyl chloride (PVC) and all new components will be free of brominated flame retardants (BFRs) from the start of 2007. Nokia loses points for failing to provide an adequate definition of what precautionary principle means in practice.

Nokia scores well on producer responsibility for its electronic waste. It supports and lobbies for Individual Producer Responsibility, which means that each company should take care of the electronic waste from its own brand products. Nokia loses points for not providing data on the amounts of mobiles actually recycled.

NOKIA Overall Score

	BAD (0)	PARTIALLY BAD (1+)	PARTIALLY GOOD (2+)	GOOD (3+)
Precautionary Principle				
Chemicals Management				
Timeline for PVC phaseout				
Timeline for BFR phaseout				
PVC-free and/or BFR-free models (companies score double on this criterion)				
Individual producer responsibility				
Voluntary takeback				
Information to individual customers				
Amounts recycled				

NOKIA Detailed Scoring

Chemical Score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Precautionary Principle		Loses points for failing to provide an adequate definition of what precautionary principle means in practice.		
Chemicals Management				Nokia leads the way, already having phased out some harmful chemicals and identifying future substances for elimination, including beryllium, nonyl phenols and NPEs (nonyl phenol ethoxylates), antimony. Nokia Substance List
Timeline for PVC phaseout				Phase out of PVC is all but complete.
Timeline for BFR phaseout			Timelines still missing on some applications.	
PVC-free and/or BFR-free models (companies score double on this criterion)			Waiting for BFR-free models to come on the market. New models are PVC-free since 31.12.05	

EPR/recycling score	BAD	PARTIALLY BAD	PARTIALLY GOOD	GOOD
Support for Individual Producer Responsibility				Support and lobbying for IPR provided in a case study.
Provides voluntary takeback where no EPR laws exist			Still no takeback in some countries, such as Argentina. For both business (B2B) and individual customers Press release (17 Feb 06) e.g. free mail-back for US Greenbox, China In Hungary	
Provides info for individual customers on takeback in all countries where products are sold			No information in countries where no takeback services.	
Reports on amount of waste electrical and electronic equipment (WEEE) collected and recycled		Information on mobile recycling, but no data on amounts of mobiles actually recycled. Additional info		