Waste and Workers in the Tech Sector:

Benchmarking the ICT Giants on their Supply and Disposal Chains

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Survey undertaken by ISIS Asset Management plc

ISIS Asset Management[1]

ISIS is a leading European investment manager with £62.1 billion[2] under management. ISIS manages its equity portfolio according to the Responsible Engagement Overlay (***reo®***) approach. With ***reo®***, ISIS engages in dialogue with investee companies in order to assess how they manage social, environmental and ethical issues and to encourage improvements where these will impact on shareholder value.

In undertaking this study, ISIS commissioned Impactt, a consultancy specialising in the management of social and environmental issues in supply chains, to assist with the research and analysis.[2]

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Executive Summary

The last few years have been challenging for the Information and Communication Technology (ICT) industry. Having only just regained modest ground after an unprecedented slump in 2001, the industry is being challenged by legislators, investors, the media and the general public to demonstrate that it is upholding good standards of governance and corporate responsibility, particularly in relation to its supply and "disposal" chains. **High tech companies are therefore facing dual pressures to cut costs and improve standards of governance and corporate responsibility.**

However, pressure to enhance environmental and social standards is not only externally driven. Many companies have realised that it is in their own business interest to improve standards in supply and disposal chains, since poor performance can result in lower productivity, weaker quality control and reputational damage, with potential knock-on effects on customer satisfaction and revenues. On the upside, working with suppliers on areas such as product design and use of hazardous chemicals can generate benefits, including cost savings and access to new markets for environmentally friendly products. **This study highlights how poor performance on social and environmental issues has the potential to impact the bottom line.**

The fact that eleven companies agreed to participate in this study and openly discuss these issues with their shareholders demonstrates a level of responsiveness and a shared interest in achieving improved practice that ISIS welcomes. However, **the study also reveals considerable variations in the level of experience and sophistication from one company to another.** Moreover, leadership on environmental issues does not necessarily go hand in hand with leadership on labour standards. Indeed, across the sample, the gap between these two areas is significant, even in the two cases (**Nokia** and **HP**) where the companies lead the sector on both counts.

The eleven companies can be grouped into three categories:

Labour standards

- **"On the Starting Grid"**
  Canon
  IBM
  Sharp
  Siemens
- **"The Chasing Pack"**
  Dell
  Electrolux
  Motorola
  Philips
  Sony
- **"Race Leaders"**
  HP
  Nokia

Environmental Management

- **"On the Starting Grid"**
  Siemens
- **"The Chasing Pack"**
  Canon
  Electrolux
  IBM
  Motorola
  Philips
  Sony
- **"Race Leaders"**
  Dell
  HP
  Nokia
  Sharp

While there are examples of excellent practice in almost all companies, there are still areas of considerable vulnerability. This is particularly the case in relation to labour standards, but there are also some substantial shortcomings in environmental management. This study has outlined the business risks companies will incur by failing to manage these issues properly, and ISIS would encourage companies to benchmark themselves against this model and take corrective action where they fall short of good practice. Key shortcomings that need to be addressed are highlighted below.

- **Board accountability:** While six of the eleven companies under review have established board- or executive committee-level responsibility for environmental issues, only three have done so for labour standards. This is an important step in demonstrating high-level commitment and ensuring strong lines of accountability for performance.

- **Policies:** While most companies have policies or codes, many labour standards policies are vaguely worded and do not reference appropriate international standards. It is essential that expectations be clearly spelled out and communicated in a way that leaves no room for misinterpretation. It is notable that one company still does not have an environmental policy covering suppliers.

- **Training and supplier outreach:** Companies need to establish effective mechanisms for communicating policies and procedures to employees and suppliers and ensuring they have the necessary skills to implement them. Only five companies provide training and technical assistance to employees and suppliers on environmental issues; four companies do so on labour standards.

- **Monitoring:** Proper monitoring systems are essential to allow companies to identify high-risk suppliers and to direct resources accordingly. Only two companies have these in place for labour standards, although six state they are developing them.

"High tech companies face dual pressure to cut costs and improve standards of governance and corporate responsibility. This study highlights how poor performance on social and environmental issues has the potential to impact the bottom line."

- **Follow-up and driving improvement:** Monitoring is unlikely to make a significant difference unless it is accompanied by a systemic process for following up with suppliers and driving improvements where necessary. Only two companies currently meet good practice standards for labour standards on this dimension; only four companies do so for environmental issues. In the case of non-compliance, business stands to gain more from working with suppliers rather than immediately terminating contracts.

- **Disclosure:** The level of disclosure on the management of both environmental and labour standards in the supply chain is generally poor. Only one company meets good practice standards on labour standards; only four on environmental issues. Companies need to provide information that is relevant and timely for investors and other stakeholders. This includes detailed accounts of overall strategy, board accountability, policy and implementation systems, as well as targets and results.

- **Product life-cycle:** Taking action to reduce the impact of products across the entire product life-cycle makes clear commercial sense. This is an area of real leadership for the sector, with all companies taking action by integrating 'Design for the Environment principles' into their operations and working with suppliers to reduce the use of hazardous materials. However, the goal posts are constantly shifting as the overall use of information technologies increases.

- **Take-back and recycling schemes:** While all companies are involved in product take-back and recycling schemes, these tend to be rather *ad hoc* and fragmented. Significantly, most companies have yet to publish clear policies with supporting targets and implementation systems. A further challenge is for companies to step up efforts to develop supporting infrastructures working with peers, governments and other stakeholders, especially in locations where legislation has yet to require this. Finally, only three companies have introduced guidelines for contractors on social and environmental issues that cover the export of e-waste to developing countries.

This study has revealed that ICT companies face multiple and complex challenges. In responding to these, some companies have introduced innovation and derived commercial benefit, while achieving improved social and environmental standards. However, the performance of the sector is highly variable and ISIS urges companies to address areas of weakness as a matter of urgency.

"In this industry, some companies have shown themselves to be alert to emerging social and environmental threats, while others - arguably most - have been asleep at the switch. Investors are well-advised to figure out the difference between the leaders and laggards, because how companies manage these emerging risks will unquestionably affect their performance and their prospects. Investors have been burned before with the ICT sector, and vigilance today may prevent heartache tomorrow." Elliot Schrage, Professor at Columbia University Business School and former Senior Vice President, Gap, Inc.

Section 1: Introduction

Why This Study?

The last few years have seen stock markets, and especially the Information and Communication Technology (ICT) sector, surge, plunge and recently regain modest ground. They have seen pension funds swing from surplus to deficit, governance scandals dominate the headlines, and the financial community's own role in the technology bubble severely challenged. Meanwhile, fund managers, as stewards of our economy's long-term savings, have encountered a different challenge: to 'mind the store' and take a more active interest in the way companies are run, so as to avert a repeat of the governance failures of the last few years.

As a fund manager responsible for managing over £60 billion[4] on behalf of insurance companies, pension funds and individuals, ISIS believes it has an obligation to look closely at all risk factors likely to affect the financial performance of its investee companies over the long term, and intervene where this will benefit shareholders. This involves detailed research and extensive dialogue with companies and other actors, so as to gain an in-depth understanding of emerging trends likely to threaten or benefit the companies in its portfolios.

This approach is reflected in the way ISIS manages its equity portfolios, known as the Responsible Engagement Overlay (***reo®***) programme. Under the auspices of ***reo®***, ISIS has undertaken a detailed benchmarking study of the practices of eleven companies in the ICT sector, to assess the extent to which they are exposed to, and manage, risks related to their supply chain and the disposal of their products (their "disposal chain").

Much has been said, and done[5], in recent years about the labour risks inherent in the garment and retail sectors. This work has been underpinned by an awareness that companies that fail to promote good working conditions and environmental standards in their supply chains can be exposed to serious reputational and operational risks. Conversely, those that do manage these issues effectively can protect themselves from scandal, and benefit from productivity gains and

"This study by ISIS Asset Management provides a thorough and timely overview of the important supply chain issues IT companies face. As such, I am sure it will be effective in encouraging more responsible supply chain management. Companies involved in the Global e-Sustainability Initiative (GeSI) are actively addressing social and environmental supply chain issues and will welcome the findings of this research." Chris Tuppen, Head of Sustainable Development and Corporate Accountability at BT plc; Chair of the Global e-Sustainability Initiative.

[4] As at 31 December 2003.

[5] See ISIS ***reo®*** reports (Q1/2003, Q2/ 2003, Q3/ 2003) on Labour Standards in the Supply Chain, http://www.isisam.com/AboutUs.asp?pageId=2.3.

improvements in quality. Despite their reputation as “clean” industries with highly-specified production conditions, ICT companies face similar challenges and risks. Failure to address them could lead to unwelcome attention from pressure groups, litigation from staff and affected communities, new regulation and new cost pressures. Here again, those companies that are alert to emerging threats and position themselves shrewdly, stand to gain, as do their shareholders.

Objectives of this study:

This study aims to:

- Spotlight key issues for the industry
- Analyse their potential impact on business performance
- Review and benchmark existing approaches
- Identify elements of good practice
- Identify gaps and scope for improvement
- Stimulate industry debate
- Comment on implications for investors.

Section 2: Methodology

Key points:

- Twelve ICT companies included in the study
- Analysis is based on detailed feedback from companies plus further background research
- Companies are benchmarked against a set of key principles of good management practice

2.1 Scope of the Report

This report reviews the performance of leading companies in the Information and Communication Technology (ICT) sector in addressing social and environmental issues in their supply and disposal chains[6]. It does not look at service providers (fixed line and mobile operators), but rather focuses on hardware providers whose production activities have more direct environmental and social impacts. Specifically, it looks at computer manufacturers, handset manufacturers and consumer electronic companies.[7]

Company selection was based on considerations of the representative weight within the ICT sector, geographic balance and the relative size of ISIS shareholdings. Twelve companies were reviewed, though one was dropped from the quantitative review to ensure comparability of results:

Europe

- **Electrolux**
- **Nokia**
- **Philips**
- **Siemens**
- **ST Microelectronics**

Japan

- **Canon**
- **Sharp**
- **Sony**

US

- **Dell**
- **Hewlett Packard**
- **IBM**
- **Motorola**

[6] In 1998, OECD member countries agreed to define the ICT sector as "manufacturing and services industries that capture, transmit and display data and information electronically". Measuring the Information Economy 2002. The OECD Definition of the ICT sector. http://www.oecd.org/dataoecd/34/37/2771153.pdf

[7] Products include computers, electronic components such as semiconductors, television and radio transmitters and receivers, electrical instruments and video equipment and mobile phone handset and fixed line telephones.

ST Microelectronics stands out in the group as the only first-tier supplier[8]. As such, its business is not strictly comparable to the others and it is therefore not included in the benchmarking. However, the company's perspective is discussed as a case study and incorporated into the qualitative discussion.

The original sample of companies invited to participate in the study was fifteen. Of these, three companies (**Ericsson, Samsung** and **Taiwan Semiconductors**) expressed interest in the study, but ultimately were unable to participate due to lack of available data[9]. **Siemens** were not willing to participate in an interview or complete the template but referred us to publicly available information.[10]

2.2 Sources of Information

Company intelligence and feedback constituted a key source of information for the report. Companies were invited to participate in a face-to-face or telephone interview, or to provide information via an electronic template.

The overview of issues in Sections 3, 4 and 5 is based on reports and feedback from:

- ICT companies
- Non ICT companies
- Research and governmental organisations
- Press
- Non-governmental organisations (NGOs).

The evaluation of company performance in Section 6 is based on:

- Publicly available information, including annual reports, sustainability reports, environment reports and other information published on the internet
- Face-to-face or phone interviews with companies conducted by ISIS
- Electronic completion of the template.

The company interviews were held during July – November 2003. In most cases, information was updated in October and November 2003 and therefore reflects corporate performance as of year-end 2003. In some cases, research included a review of confidential internal documents and access to internal systems; this report respects the confidentiality of these documents and sources. Research also included visits to several manufacturing sites.

8 A first tier supplier is a company which provides a product/service to a purchasing company and which receives payment from the purchasing company, i.e. there is a direct commercial relationship between them.

9 Ericsson had recently undergone significant corporate restructuring and, at the time when we approached the company, responsibility for these issues was not clear.

10 Siemens stated that participation in the study was outside its normal communications policy and too time-consuming.

2.3 Benchmarking

In recognition of the fact that the eleven companies in this study face sometimes widely divergent circumstances, this study aims to identify a basic set of principles that underpin good practice in the area of social and environmental management, rather than prescribing a detailed set of actions.[11] These have formed the background of our benchmarking methodology and relate to the following areas of management practice:

- Board accountability
- Policies
- Capacity building and training
- Monitoring
- Follow-up and driving improvements
- Disclosure

The performance of each company is scored on the basis of information given during the interview and in the template, supplemented by publicly available information.[12] The scores are tabulated and an industry average for each of the above areas is provided. Individual companies are also scored in each area of management practice on a scale between 0 and 3. This enables us to gauge how well they perform against a benchmark of good practice and to look at the performance of the industry as a whole.

A complete overview of the scoring system is provided in Appendix 1, and it is also integrated into the analysis in Section 6.

2.4 Constraints and Limitations

The study benchmarks policies and systems, but does not assess the impact of these policies and systems in terms of improved environmental and social performance.

The analysis is based on voluntary information provided by companies.[13]

"The fact that eleven companies agreed to participate in this study and to openly discuss these issues with their shareholders demonstrated a level of responsiveness and a shared interest in achieving improved practice that ISIS welcomes. However, the study also reveals considerable variations in the level of experience and sophistication from one company to another." (from the Executive Summary)

11 These are based on our extensive discussions with companies and industry experts across different sectors and are consistent with the Association of British Insurers' Guidelines on Social Responsibility (www.abi.org). They are also reflected in ISIS's Statement of Policy on the Governance of Corporate Social Responsibility Issues http://www.isisam.com/AboutUs.asp?pageID=2.3.1.2.

12 Siemens is benchmarked solely on the basis of publicly available information since the company declined to discuss its approach with us further.

13 This information has not been externally verified.

Section 3: The Changing Face of the ICT Industry

Key points:

- ICT companies face dual challenge of cutting costs and improving social and environmental standards
- Trend towards outsourcing of production and disposal to low and middle-income countries where enforcement of environmental standards and internationally-recognised labour standards is generally weaker

Following a period of seemingly unstoppable growth, the high-tech market experienced a serious slump in 2001. Some figures indicate that a recovery is now underway. Global PC shipments during the second quarter of 2003 were up 10% on the previous year[14] and the global electronics industry as a whole is predicted to grow from $851 billion to $1,389 billion over the next 5 years (10% average annual growth rate).[15] The global market for semiconductor equipment was forecast to be worth $20.5 billion this year[16] and the total wireless market $37,005 million.[17]

However, despite some positive indicators, the sector has yet to experience a full recovery and pressure to contain costs is still acute. Companies therefore face the dual challenge of simultaneously cutting costs and improving social and environmental standards.

3.1 Trend Towards Outsourcing

The ICT industry has undergone massive restructuring over the past twenty years due to intensive competition on price and product innovation. As in other sectors, all major companies are increasingly outsourcing production to contract manufacturers in markets with lower labour costs.

Southeast Asian countries, including China, Malaysia and the Philippines, have become major producers of electronic products. In 2003, electronic and electrical products accounted for 60% of total exports from the Philippines and for two-thirds of exports from Singapore[18]; they are also the highest value export from Malaysia (£29.5 billion).[19] There has been considerable investment in Mexico by multinational companies to facilitate entry into the US and Canadian markets. Although most ICT companies have established policies and systems to manage their own social and environmental standards, many have lagged behind other sectors in applying these same standards to their supply chains.

14 "Why PCs are still a hard sell", BBC News, 21st August 2003.
15 Semiconductor Equipment and Materials International (SEMI) Information www.semi.org
16 UBS Weekly Global Tech Trader, 7th November 2003.
17 ISIS Market analysis.
18 HSBC Business Profiles, Philippines and Singapore, September 2003.
19 HSBC Malaysia Business Profile, September 2003.

The trend towards outsourcing is mirrored at the “end of life” stage. Most companies use third party contractors, who form part of a nascent industry, to handle product disposal and recycling. Only a limited number of these providers are certified as operating under adequate environmental standards and social standards have yet to be introduced. Export of electronic waste by these third parties presents a growing problem (see Box 4B below).

“Companies face the dual challenge of simultaneously cutting costs and improving social and environmental standards.”

Section 4: The Drivers for Business - Risks and Opportunities

Key points:

- Companies are facing increasing pressure from the media, NGOs, shareholders and the wider public to ensure that minimum standards in supply and disposal chains are upheld
- New legislation is also driving companies to act as is the threat of potential liabilities
- But the drivers for good performance are not only external. Companies are recognising that good management of social and environmental issues can generate productivity gains, open up new markets and help minimise operational risks such a disruption of supply

4.1 Reputation Risk

Until recently, media and public attention on the issue of labour standards had focused primarily on the garment and footwear sectors. The experience of companies such as Nike and Gap illustrates the vulnerability of brand names to allegations of human rights abuses. As early as 1998, the CEO of Nike Phil Knight openly acknowledged that ''the Nike product has become synonymous with slave wages, forced overtime and arbitrary abuse".[20] Both companies have since invested considerable resources in an attempt to monitor and manage labour standards within their supply chains, yet they have not been able to shake off the stigma of sweatshop allegations. Employee morale has suffered badly.[21] By contrast, the ICT industry has generally been perceived as a clean and high-tech working environment with no significant social or environmental risks. Yet, the reality can be quite different (see Box4A).

Box 4A

Coming under scrutiny

ICT supply chains are coming under growing scrutiny from academics, the media and activist groups. Professor Alyson Warhurst, Director of Corporate Citizenship at Warwick Business School, has commented that "the conditions in some [factories] are quite terrible, and they're potentially worse [than in the apparel factories] because of the toxicity of some of the materials, repetitive strain from constantly doing the same operation and eyesight problems arising from long hours working on small parts".[22]

Professor Elliot Schrage from the Columbus Business Schools believes that "[t]he next big battle is going to be computers and electronics. Activists are moving up the value chain in scrutinising labour practices. They're moving away from the lowest wage unskilled work and they're moving progressively towards more skilled but still low-wage labour - and who are the candidates for that? That would be semi-conductor assembly and the manufacturing of electronics and computers."[23]

20 Phil Knight, CEO of Nike, from a speech at the National Press Club in Washington on 12th May 1998.
21 Michael Skapinker: "Cost cuts and false economies", The Financial Times, 24th November 2003.
22 Sarah Murray: "Supply chain: Technology factories face 'sweatshop' probe", The Financial Times, 26th September 2003.
23 Elliot Schrage, professor at Columbia Business School and formerly senior vice-president of global affairs at Gap, quoted in: "Supply chain: Technology factories face 'sweatshop' probe", The Financial Times, 26th September 2003.

While ICT companies themselves may only directly be involved in assembly and testing, much of the overall manufacturing process is low tech and labour-intensive, and so faces similar issues to the garment and footwear sectors. Secondly, the ICT sector uses toxic chemicals in the manufacturing processes which, without proper management, can have a significant impact on the local environment and harm worker health and safety.

NGO campaigns are beginning to gain momentum and gaining press attention. The Silicon Valley Toxics Coalition has published reports on the export of electronic waste ("e-waste") to developing countries (see Box 4B below) and highlighted alleged shortcomings in approaches to responsible recycling of computer manufacturers. In January 2004, The Catholic Agency for Overseas Development (CAFOD) is expected to launch a campaign on poor labour practices in electronics factories in countries such as Mexico, Thailand and China, whose customers include multinational computer manufacturers. Their research alleges a range of employment practices that contravene internationally-recognised standards, including "humiliating strip searches, routine pregnancy testing and employment terms that undermine workers' rights".[24]

Box 4B

The trouble with electronic waste

Rapid obsolescence of ICT products makes e-waste the fastest growing waste problem in the world. A US National Safety Council Report predicted that 63 million personal computers will become waste in the US alone in 2003.[25] By 2005, in the US, 130 million mobile phones will be thrown out each year.[26] The Canadian Council of Ministers of the Environment has made e-waste a priority. Electronics Producers created the Electronics Product Stewardship (EPS) Canada in 2002.[27]

Whereas under the Basel Convention (see Section 4.3) the export of e-waste from Europe to developing countries is prohibited, much of America's e-waste is exported for 'recycling' to Southeast Asia, particularly China. Lax enforcement of environmental law and workers´ exposure to high levels of toxic materials, as well as dumping of e-waste has prompted a number of stakeholders to object on environmental and health grounds. A 2002 report by The Silicon Valley Toxics Coalition (SVTC), concluded: 'trade in e-waste is an export of real harm to the poor communities of Asia…..(it) remains a dirty little secret of the high tech revolution.'[28] A BBC's investigation and photo essay, entitled, 'Recycling poison: inside China's e-waste workshops' exposed both the human and environmental damage caused by this practice.[29]

24 Sarah Murray: "Supply chain: Technology factories face 'sweatshop' probe", The Financial Times, 26th September 2003.
25 Report cited on US Environmental Protection Agency website: www.epa.gov
26 Report by Inform, a US environmental organisation, cited in "Environmentalists Identify New Menace: Discarded Cellphones", The New York Times, October 2002.
27 Mountains of electronic waste pile up across Canada, in Environmental News Service (ENS), 18th November 2003.
28 "Exporting Harm: The High-tech trashing of Asia", Basel Action Network/Silicon Valley Toxics Coalition, 25th February 2002.
29 Recycling Poison: Inside china's e-waste workshops, BBC News Website http://news.bbc.co.uk/hi/english/static/in_depth/world/2002/disposable_planet/waste/chinese_workshop/

There is good reason to be concerned that the ICT sector could experience a similar fate to that of the garment and footwear sectors if steps are not taken to ensure that its supply and disposal chain risks are managed effectively.

It is notable that mobile phone companies have already begun to react to a potential reputational risk related to the sourcing coltan in the Congo (see Box 4C). A number of companies taking part in the study (e.g. **Dell, HP, IBM, Motorola, Nokia** and **Philips**) have issued a statement on coltan and approached their suppliers on the issue.

Box 4C

The trouble with Coltan

Columbite-tantalite ("coltan") is an ore containing tantalum, a metal used in all mobile telephones and computers. The Democratic Republic of Congo (DRC) has an estimated 80% of the world's coltan resources. Of world's consumption of tantalum, Congo is producing approximately 3-5 %.[30]

A report from the United Nations Security Council in 2002 found that profits from coltan mining in the DRC were being siphoned off to fuel the civil war. Coltan mining has also been linked to forced labour and destruction of the local gorilla populations.[31] Campaign groups made a direct link to major mobile phone brands, calling on "Leading European corporations such as Alcatel, Nokia and Siemens [to] immediately refrain from using components containing tantalum originating from [the] conflict area".[32] Flora & Fauna International (FFI) and other groups favour properly managed mining and, together with the Global e-sustainability Initiative, FFI has investigated the role industry has to play in the process of building a sustainable coltan industry.[33]

4.2 Liabilities

ICT companies are increasingly subject to lawsuits demanding compensation for alleged ill-health effects of exposure to toxic chemicals, low wages, inappropriate use of homeworkers, environmental pollution and abuse of workers' rights (see Box4D).

"There is good reason to be concerned that the ICT sector could experience a similar fate to that of the garment and footwear sectors if steps are not taken to ensure that its supply and disposal chain risks are managed effectively."

30 Mineral Commodity Summaries, U.S. Geological Survey, Reston (Virginia), January 2003. The biggest producer of tantalum ore is Australia, see e.g. The Tantalum-Niobium International Study Center: http://www.tanb.org/.

31 "Mobile phones fuel gorilla plight", BBC News Online, 11th June 2002.

32 Marc-Olivier Herman, spokesman for European consortium of NGOs, cited in "Coltan trade funds DRC War", The Namibian, 16th January 2002.

33 "The coltan mining crisis in the Democratic Republic of Congo: The Role and Responsibility of industry", GeSI and Flora & Fauna International 2003.

Box 4D

We'll see you in court

- Over 250 worker health lawsuits have been filed against **IBM** in America alone;[34] some 57 relate to birth defects in workers' children.[35]
- In the US, 50 "clean room" workers (working in sealed rooms where microchips and other electronic parts are made in a dust-free environment) have brought a case claiming that **IBM** and other high-tech companies withheld vital information that workers could have used to protect themselves.[36]
- A Federal investigation into electronics homeworking in the US Silicon Valley resulted in four local companies being ordered to pay US$284,000 in back wages to workers as their piece rate wages did not amount to the legal minimum. Another Silicon Valley company has paid a sealed settlement after being sued by a former employee for not paying for overtime work carried out at home.[37]
- Workers making televisions and semi-conductors at a factory in Taiwan filed a lawsuit against Radio Corp of America (**RCA**), claiming that contamination of ground and drinking water with toxic chemicals and exposure to carcinogens within the factory was responsible for 1,375 cases of cancer among former employees, including 216 deaths. "This is the worst case of cancer cluster in the world caused by the high-tech industry," said Ted Smith, of Silicon Valley Toxics Coalition.[38]

4.3 Legislation

The last few years have seen an increase in government legislation aimed at minimising environmental impacts through product design and disposal.[39] Important legislative developments include:

- Basel Convention: an international convention adopted in 1989, banning the export of hazardous waste to non-OECD countries from EU countries.
- EC Directive on Waste Electrical and Electronic Equipment (WEEE): a European directive adopted in 2002 imposing financial responsibility for recycling and final disposal of electrical goods onto producers. The directive is also applicable to imported goods.
- EC Directive on the Restriction of Hazardous Substances in Electrical and Electronic Equipment (ROHS): a European directive adopted in 2002 banning the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in electrical equipment from 1st July 2006. Primarily designed to reduce environmental and health impacts of disposal, this legislation will also help to reduce occupational exposure to hazardous substances in factories.

34 "Californian Court to Decide on IBM Cancer Suit", Reuters, 21st September 2003.
35 "Jury selection starts in California. IBM cancer lawsuit", Reuters, 20th October 2003.
36 "Cancer lawsuit against IBM watched closely", Mercury News, 28th September 2003.
37 "Piecework lawsuit settled claims over man's home assembly of electronics", San Jose Mercury News, 14th November 2000.
38 "Taiwan workers mull US lawsuit over toxins", Asia Times, 11th June 2002.
39 Labour practices are not yet covered by similar legislation. Most companies state that they require their suppliers to comply with local law, as an absolute minimum. However, in many source countries, laws are poorly enforced. The International Labour Organisation's (ILO) Core Conventions represent international standards that are frequently used for reference but have no legal power.

- EC Draft Directive for Energy Using Products (EUP):[40] This is designed to reduce the impacts on the environment associated with the production, use and disposal of energy using equipment. Products have to be evaluated against certain environmental standards prior to coming onto the EU market.[41]
- The Japanese Government has passed tough recycling measures that came into effect in 2001. Television sets and white goods must now be between 50% and 60% recyclable.[42]
- New legislation in California: The SB 20 Bill requires companies to charge an upfront fee for recycling. This legislation is being challenged on the grounds that it does not advance the concept of producers' responsibility. However, it may serve as a precedent for further US State and federal legislation.

4.4 Production risks and opportunities

Outsourcing, horizontal integration and lean manufacturing have all made leading companies in the sector more dependent on their suppliers. Serious problems in the supply chain, such as factory fires, industrial action over pay and conditions, or high profile exposés of poor labour conditions, can interrupt supply. Poor working conditions and weak environmental standards can undermine product quality and reliability, and result in work loss through high levels of occupational sickness.

Experience from within the sector and outside suggests that working with suppliers to improve labour and environmental standards can help minimise these risks. It can also help build closer working relationships, a process that can enhance the company's ability to meet high quality standards and tight delivery times. This is highlighted by Rowena Wright, ethical trading manager at BT. "Through our work on ethical trading with our suppliers we have been able to better manage the risks to our reputation and even enhance it. It has helped us understand our supply chain better, which goes hand in hand with improved supplier relationships. Although we are in the relatively early stages of implementing our programme, we are already finding anecdotal evidence of suppliers finding their staff retention levels dramatically improving as a result of working with us on ethical trading. The retaining of skilled staff then leads to improved product quality being passed onto us."[43]

This point has also been underlined in the apparel sector by Lord Marcus Sieff, former Chairman of Marks & Spencer, who observed that "When it [M&S] insisted its suppliers treated their staff well too, their performance always improved. After improving working conditions, its [Bovis, a supplier to M&S] productivity increased, labour turnover dropped and costs fell."[44]

4.5 Disposal risks and opportunities

As discussed in section 4.3, new legislation on recycling has been introduced particularly in Europe. Not meeting these requirements will be costly for companies and also tarnish their reputation as they come under increasing public scrutiny.

Recycling and product take-back has potential to offer new revenue streams. For example, recycled material can be reused in products. Offering a recycling service also has the potential to become a product differentiator.

40 Ref. Brussels, 01.08.2003, COM(2003) 453 final, 2003/0172 (COD) Proposal for a Directive of the European Parliament and of the Council on establishing a framework for the setting of Eco-design requirements for Energy-Using Products and amending Council Directive 92/42/EEC.

41 http://www.entecuk.com/client/ec/downloads/en_appa.doc

42 "Japanese plant takes on e-waste", BBC News 23rd July 2003.

43 ISIS interview with Rowena Wright, BT, Ethical Trading Supply Chain Manager, 6th January 2004.

44 Lord Sieff quoted in "Cost cuts and false economies", by Michael Skapinker. The Financial Times, 24th November 2003; from his book: "Don't Ask the Price".

Section 5: Emerging Issues

Key points:

- Companies face significant operational and reputational risks in relation to labour and environmental standards in both supply and disposal chains
- Workers exposed to toxic cocktail of hazardous chemicals
- Reports of low wages, excessive over-time, discrimination and bonded labour
- Allegations of destruction of local eco-systems and complicity in human rights abuses in relation to the extraction of raw materials
- Hazardous materials used in production require stringent environmental management but suppliers located in countries where environmental regulations are weak
- Controversy over the export of electronic waste to developing countries where proper controls over the disposal of toxic materials are lacking

This section provides a summary of labour and environmental issues associated with the sourcing, production and disposal of products in the ICT sector. The industry's current approach to managing these issues is examined in Section 6.

5.1 Labour Practices

5.1.1 Health & Safety

Exposure to chemicals is probably the biggest single risk to the long term health of workers in the industry. Manufacturing processes in the ICT industry involve the use of more than 300 materials and substances, including alloy fluxes, benzene, ethyl alcohol, nickel and epoxy resin systems, many of which are highly toxic. Some are also known to be carcinogenic.

There is little conclusive evidence of the effects of long term exposure to this cocktail of chemicals. However, a number of studies reveal potentially alarming links between exposure to ICT production processes and health problems. Studies carried out in the US and the UK indicate a higher than normal incidence of miscarriages, birth defects and cancer clusters amongst workers in electronics factories.[45] A UK Health and Safety Executive study at a National Semiconductor site in Scotland found elevated rates of breast, lung, brain and stomach cancer among workers and former employees.[46] Other potential human health effects include asthma, respiratory problems, skin irritation/damage, liver damage and potentially fatal lung disease and occupational illnesses such as Repetitive Strain Injury (RSI), neck and back pain, and eye strain, exacerbated by poor ergonomics and long working hours.

45 "Cancer risk in the semiconductor industry: A Call for Action". Silicon Valley Toxics Coalition, 2002.
46 "Study highlights cancer rates at plant", BBC News,11th December 2001.

According to US Bureau of Labor statistics for 1999, occupational illnesses serious enough to cause a reportable work loss were 10% for the electronics industry and 14.9% in semiconductor manufacture, against a 6.1% average across all manufacturing. Moreover, a study by activist group Silicon Valley Toxics Coalition of the reporting of occupational illnesses in California found that semiconductor companies reported fewer than half of all cases that should have been reported according to OSHA criteria,[47] suggesting that the discrepancy between levels in the electronics sector and general industry may be higher still.

The above studies are all based on UK and US cases, where legislation on use of toxic materials is stringent, as is enforcement, and employers are aware of the risks involved. As discussed, ICT manufacture is increasingly occurring in low or middle income countries where worker protection is less stringent and where long working hours increase exposure. In this context, press and activist groups report that companies fail to implement even basic health and safety measures, such as providing safety training or correct protective equipment. Further, at the end of the product's life, workers involved in the recycling and disposal of ICT products are reportedly exposed to high levels of toxic chemicals without proper protection.[48]

Risks to Business:

- Reduced productivity from high rates of occupational illness
- Reputational damage, and damaged morale, from death and/or serious health issues in the supply chain
- Risk of litigation: workers may sue companies for failing to adequately communicate the health risks of their work and offer proper protection.

5.1.2 Wages

Low wages are a characteristic of manufacturing industries in many of the sector's key producing countries including China, the Philippines and Mexico. CAFOD reports that pressure on price and the recent downturn in the technology sector have resulted in stagnant wage levels, whilst living costs have continued to rise. This makes it more likely that they will seek to work excessive overtime in order to earn enough to support themselves and their family. The correct overtime premiums are often not paid for these extra hours (see Section 5.1.3 below).[49]

Risks to Business:

- Low wages fuel "sweatshop" allegations by media and campaigners

47 "Cancer risk in the semiconductor industry: A Call for Action". Silicon Valley Toxics Coalition, 2002.
48 Rachel Shabi: "The e-waste land", in The Guardian, 30th November 2002.
49 Forthcoming CAFOD report, "Clean up your computer", documents systematic discrimination against factory workers in Mexico by employment agencies. DRAFT, 31st October 2003 CAFOD.

5.1.3 Working hours

Reports of actual hours worked are striking in many source countries. In China, for example, the law mandates a working week of no more than 52 hours (40 hours plus 12 hours overtime). However, it is not unusual to find workers working 72-84 hours per week. This level of overtime work increases the exposure of workers to toxic chemicals, leaves workers exhausted and increases the frequency of accidents. Professor S. Prakash Sethi of Baruch College's Zicklin School of Business comments: "Overtime abuse is just as bad in the high-tech industry as it is in the garment industry, and the hazardous-materials issue is even worse. It is false to say that workers love overtime. They do it because they cannot afford to live without it."[50]

Excessive overtime is driven by a number of factors including:

- Poor production planning
- Short lead times
- Volatile ordering patterns and seasonality, leading to excessive hours in some months and a lack of work in other months
- Low efficiency and/or productivity (made worse by high levels of overtime)
- Company culture of working excessive hours
- Poor quality inputs
- Low skilled workers (exacerbated by high worker turnover)
- Little commercial incentive to reduce hours if overtime premiums are not paid.

Risks to Business:

- Excessive overtime fuels "sweatshop" allegations by media and campaigners
- Reduced productivity and quality due to fatigue, higher rates of occupational illness and accidents.

5.1.4 Other social issues

Discrimination has been reported to be a problem in the industry, particularly during recruitment and 'screening' of new employees.[51] These practices tend to be directed against women, homosexuals and people with diseases such as HIV/AIDS and hepatitis. There are also reports of union activists being blacklisted and dismissed.[52]

"Overtime abuse is just as bad in the high-tech industry as it is in the garment industry, and the hazardous-materials issue is even worse. It is false to say that workers love overtime. They do it because they cannot afford to live without it."
Professor S. Prakash Sethi of Baruch College's Zicklin School of Business.

50 S. Prakash Sethi, a professor from Baruch College's Zicklin School of Business in New York http://www.philly.com/mld/philly/news/world/4647882.htm

51 Forthcoming CAFOD report, 'Clean up your computer' documents systematic discrimination against factory workers in Mexico by employment agencies. DRAFT, 31st October 2003 CAFOD.

52 Freedom of Association is protected under the UN Universal Declaration of Human Rights, ILO Conventions and in the labour law of most countries.

Another issue of concern is the risk of suppliers using bonded labour. In many Asian countries, job-seekers have to pay a fee to employment brokers who recruit on behalf of large companies. These arrangements leave them highly indebted to the brokers, and in many cases they cannot live on what is left from their wage. One press report cites **Nike, Motorola** and **Ericsson** as companies with suppliers where debt bondage has allegedly occurred.[53] **Motorola** has since required its suppliers to pay the broker fee on behalf of all recruits to address this issue.[54]

Risks to Business:

- Adds a 'shock' factor to media and NGO campaigns.

5.2 Environmental Issues

Significant environmental concerns arise at several points in the product lifecycle including:

- Extraction of raw materials
- Within the manufacturing/assembly supply chain
- Product disposal and recycling

It is notable that social and environmental issues are closely linked, particularly with regard to the extraction of raw materials (see 5.2.1) and the use of hazardous chemicals (see sections 5.1.1 and 5.2.2). In the latter case, reduction in the use of hazardous chemicals also delivers health benefits for workers.

5.2.1 Extraction of raw materials

Without careful management, extraction of non-renewable resources (minerals and metals) for ICT products can have a potentially devastating impact on local ecosystems and the environment. More indirectly, mining activities can cause social disturbances, such as prompting an influx of migrant workers or destabilising local communities, which in turn provoke environmental damage. The specific issue of coltan extraction is discussed in Box 4C.

Risks to Business:

- High profile, emotive campaigning and media coverage, linking the industry to environmental degradation.

53 Nicholas Stein: "No way Out", The Fortune Magazine, 8th January 2003.
54 ISIS interview with Richard J. Guimond, Vice President, EHS, Risk, and Quality, Motorola Corporation, 16th October 2003.

5.2.2 Manufacturing/Assembly supply chain

Hazardous substances are widely used in the manufacture of ICT products. These chemicals are potentially serious environmental pollutants, in addition to posing a health risk to workers (see Section 5.1.1). Inadequate waste treatment facilities can cause waste from production to leak into the surrounding environment, leading to groundwater and air pollution, soil contamination, hazardous air emissions and disruption and/or damage to biodiversity.

The risks associated with the use of hazardous chemicals in the sector are reflected in the growth in regulation in the US and Europe restricting their use (see Section 4.3.) However, legislation in low and middle income countries where ICT products are manufactured is less developed and enforcement is often weak.

Contamination of ground and drinking water around high-tech factories in Asia has been documented in the media and in a report produced by the California Global Corporate Accountability Project.[55] Workers at one semi-conductor plant in Taiwan alleged that managers often told them to dump chemicals including perchloroethylene and trichloroethylene into the soil, down a well or down the drain.[56] These workers are now suing their employer for health effects of contaminated drinking water (see Section 4.2).

Risks to Business:

- Cost of complying with ever-tightening legislation on the use of hazardous chemicals
- Risk of failing to meet European and US product standards
- Potential litigation over environmental damage and pollution
- Reputation damage from campaign groups and media.

55 "Dodging Dilemmas? Environmental and Social Accountability in the global operations of California-based high-tech companies", Report by the California Global Corporate Accountability Project and the Nautilus Institute, 17th May 2002.

56 "Taiwan workers mull US lawsuit over toxins", Asia Times, 11th June 2002.

5.2.3 Product Disposal and Recycling

The concept of "producer responsibility" for product disposal and recycling is gaining popularity both with the public and with legislators (see Section 4.3).

A particularly controversial issue is the export of electronic waste ("e-waste") by third party contractors from the US to Southeast Asia, particularly China, where enforcement of environmental and health and safety laws are lax. Once reaching its destination, obsolete equipment is salvaged and the non-sellable remains are disposed either in landfills, acid baths, or through open burning or illicit "fly-tipping". Reports indicate that these processes can lead to leakage and contamination of soil and groundwater, affecting farming and drinking water supplies. According to the Basel Action Network (BAN), a pile of 500 computers contains 717kg of lead, 1.36kg of cadmium, 863 grams of chromium and 287 grams of mercury – all poisonous metals. Workers involved in processing the waste also come in close contact with toxic metals, acids and plastic fumes, generally with minimal protection. One study tested levels of lead, chromium and tin in the blood of local populations in the Guiyu region of China and found these to be significantly higher than WHO and US recommended thresholds.[57]

Business Risks and Opportunities:

- Reputational risks, from negative coverage of hazardous waste export and dumping (emotive terms such as "toxic dumping" have been used by the press)
- Opportunity to capitalise on growing popularity of the concept of producer responsibility
- Cost of complying with new legislation (e.g. WEEE Directive)
- Opportunity to build revenue generating businesses around recycling and disposal services.

"Companies should collaborate with peers in the sector to help align policies and so avoid placing conflicting demands on suppliers and contractors. Recycling is an area where the benefits of co-operation are especially evident." (from the conclusion)

57 "Recycling Poison: Inside china's e-waste workshops", BBC News Website; http://news.bbc.co.uk/hi/english/static/in_depth/world/2002/disposable_planet/waste/chinese_workshop/ Single samples taken by the BAN researchers in the Guiyu region tested 190 times the World Health Organisation's safe level for lead, had chromium levels 1,338 times the level deemed safe in the US and tin levels 152 times the US threshold.

Section 6: Benchmarking the Performance of the Industry[58]

Key points:

The study reveals that the level of experience and sophistication of approach varies considerably across companies and across issues. The eleven companies are grouped into three categories:

Labour standards

- **"On the Starting Grid"**
  Canon
  IBM
  Sharp
  Siemens
- **"The Chasing Pack"**
  Dell
  Electrolux
  Motorola
  Philips
  Sony
- **"Race Leaders"**
  HP
  Nokia

Environmental Management

- **"On the Starting Grid"**
  Siemens
- **"The Chasing Pack"**
  Canon
  Electrolux
  IBM
  Motorola
  Philips
  Sony
- **"Race Leaders"**
  Dell
  HP
  Nokia
  Sharp

It is notable that excellence in environmental issues does not always go hand in hand with excellence on labour standards. While some companies are meeting good practice on the management of environmental issues, the management of labour practices falls far short of good practice standards in almost all cases.

The benchmarking methodology is based on a set of basic principles that ISIS believes underpin good practice in the management of social and environmental issues. ISIS recognises that different approaches to managing social and environmental issues are appropriate in different contexts but believes it is possible to identify key elements of good practice.[59] This judgement is informed by extensive discussions with companies and industry experts across different sectors including leaders in the corporate responsibility field both within the ICT sector and outside.

58 This section benchmarks the performance of eleven companies against good practice principles. As set out in Section 2.2, the analysis is based on publicly available information plus face-to-face or phone interviews with companies conducted by ISIS and company feedback via completion of an electronic questionnaire.

59 These are consistent with the Association of British Insurers' Guidelines on Social Responsibility (www.abi.org). They are also reflected in ISIS's Statement of Policy on the Governance of Corporate Social Responsibility Issues http://www.isisam.com/AboutUs.asp?pageID=2.3.1.2

These elements of good management practice are:

- **Board accountability:** Effective Board accountability for any social, environmental or ethical issues that represent significant risks or opportunities for the business
- **Policies:** Clearly articulated policies for any such issues
- **Capacity building and training:** Ensuring that staff and high risk suppliers have access to relevant information and skills to implement policies
- **Monitoring:** Systematic process for monitoring of performance
- **Follow-up and continuous improvement:** A clear process for following up and for driving improvements where needed
- **Disclosure:** Transparent disclosure of policies and company performance.

In addition to the above generic themes, the report benchmarks company performance on two specific areas:

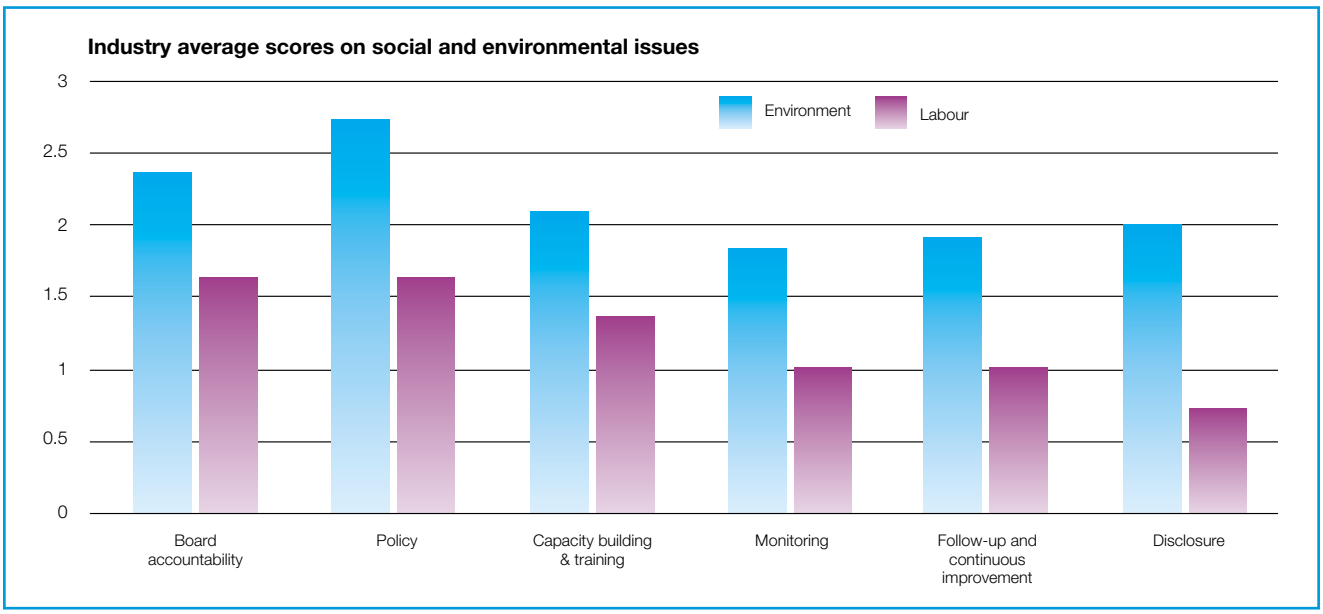
- Extent to which companies take a life-cycle approach to product development
- Company approaches to take-back and recycling including electronic waste.

The performance of each company is scored on the basis of information given during the interview and in the information template. In some cases, this is supplemented by publicly available information.[60] Each company is scored in each area of management practice, on a scale between 0 (no or very limited activity) and 3 (in line with good practice). The full scoring system and criteria for each issue is provided in Appendix 1.

The scores are tabulated and an industry average for each of the above areas is provided. Each individual company is given a percentage score against each management area. This enables us to gauge how well they perform and to look at the performance of the industry as a whole.

6.1 Overview of findings

6.1.1 Comparison of industry performance on labour issues and environmental issues



60 Siemens is benchmarked solely on the basis of publicly available information since the company was not willing to attend an interview or complete the electronic template.

Figure 1 (overleaf) compares company performance on environmental issues and labour issues in the supply chain across the six dimensions of good management practice. It shows that:

- **The management of labour issues lags significantly behind management of environmental issues across the board.**
- With one notable exception, all companies in the group have strong policies on environmental issues in the supply chain supported by relatively robust monitoring, follow-up and training for suppliers.
- In contrast, policies on labour standards are weaker and systems for monitoring, follow-up and training are underdeveloped.
- Companies are moderately happy to talk about the environmental risks in the supply chain in public reports, but are not ready to discuss risks arising from labour issues.

These disparities can be explained by a number of factors. Most importantly, it is clear that the drivers for environmental excellence have, to date, been stronger than for social issues. For example, good performance on environmental issues is often easier to translate into direct benefits in the form of more environmentally friendly products and cost savings from more efficient resource consumption. Further, companies increasingly face environmental legislative requirements (e.g. the ROHS and WEEE Directives in the EU) which have direct supply chain implications to an extent that is not mirrored on the social side. In addition, companies have access to well established international standards for environmental management (e.g. ISO 14001).

The fact that companies are more advanced in setting up board accountability and policies for labour standards than in establishing implementation systems reflects the relative newness of this issue for companies. In many cases, labour issues are being integrated into existing environmental or sustainability supply chain policies. For example, **Philips** has had an environmental policy since the early 1990s but only recently integrated the social element.

6.1.2 Comparison of individual company performance on labour issues and environmental issues

A comparison of the performance of each individual company on labour and environmental issues in the supply chain demonstrates that performance on environmental issues is much stronger than on labour issues. Company scores are expressed as a percentage of the total score available for good practice. In the environmental area, all companies score more than 50%. For labour issues, only two companies score above 70%, a further two more than 50%. Out of the six companies that scored below 50%, two companies did not receive a single point.

"The management of labour issues lags significantly behind management of environmental issues across the board."

This comparison also highlights the significant disparities between companies. **It reveals that, while almost all companies recognise these issues and are beginning to address them, the level of experience and sophistication in their approach varies significantly.** The companies can be grouped into three categories:

Labour standards

- **"On the Starting Grid"** (scoring less than 25%)
  Canon
  IBM
  Sharp
  Siemens
- **"The Chasing Pack"** (scoring between 25-75%)
  Dell
  Electrolux
  Motorola
  Philips
  Sony
- **"Race Leaders"** (scoring more than 75%)
  HP
  Nokia

Environmental Management

- **"On the Starting Grid"** (scoring less than 25%)
  Siemens
- **"The Chasing Pack"** (scoring between 25-75%)
  Canon
  Electrolux
  IBM
  Motorola
  Philips
- **"Race Leaders"** (scoring more than 75%)
  Dell
  HP
  Nokia
  Sharp
  Sony

It is notable that companies who are more advanced on environmental issues are not necessarily most advanced on labour issues. For example, **Sharp** is one of the leaders on the environment, but on "the Starting Grid" with regard to tackling labour issues. Similarly **Dell's** performance on social issues places it in the "Chasing Pack" group whereas it is in the "Race Leaders" group on environmental standards.

6.2.1 Detailed analysis of corporate approaches to managing social and environmental issues in the supply chain

The following section discusses company performance in greater depth across the six dimensions of good practice management.

Dimension 1: Board accountability

Company structures with regard to the highest governing body, the Board, differ across countries.[61] Ensuring clear lines of accountability up to the Board or Executive Committee is a fundamental element of good practice and is an indicator both of the level of commitment of the company and the effectiveness of its management and internal control structures.

Good practice criteria

Is there a senior manager with responsibility for labour issues in supply chains?

Yes, specific Director with responsibility at Board Level – score 3
Yes, co-ordinator reports directly to Board – score 2
Yes, co-ordinator does not report directly to Board – score 1
No, no defined responsibility – score 0

Is there a senior manager with responsibility for the environmental issues in the supply chain?

Yes, specific Director with responsibility at Board Level – score 3
Yes, co-ordinator reports directly to Board – score 2
Yes, co-ordinator does not report directly to Board – score 1
No, no defined responsibility – score 0

With regard to labour standards:

- Three out of the eleven companies state that responsibility for labour practices in supply chains rests at Board Level.
- In a further four companies, the issues are managed by senior managers who report directly to the Board.
- One company manages the issues at an operational level, with no reporting to the Board.
- Three companies did not give details of management responsibility.

With regard to environmental issues:

- Six out of the eleven companies state that responsibility for environmental issues in supply chains rests at Board Level.
- In a further four companies, the issues are managed by senior managers who report directly to the Board.
- One company does not give details of management responsibility.

61 In determining board level responsibility, it is important to take into account the differing board structures across different countries. Whereas the UK has a unitary board, European companies have a two tier board structure. In ISIS´ view, the US Board comprises in effect both bodies: the Supervisory Board and the Executive Committee. For the purposes of this study, membership of a US company's Executive Committee is therefore seen as equivalent to board level responsibility.

It is important to recognise the rich diversity of experience. Hence, different companies implement the principle of board accountability in different ways (See Box 6A).

Box 6A

Company approaches to board/executive committee accountability

At **Dell**, the Head of Procurement sits on the Executive Committee. **Dell** suppliers' environmental and health and safety metrics are incorporated into quarterly manufacturing operations reviews with its senior management.

At **HP**, a Supply Chain Council is responsible for the implementation of the Supply Chain Social and Environmental Responsibility (SER) programme and reports directly to the Executive Committee. Each business unit is represented on the Supply Chain Council. SER has also been integrated into **HP**'s procurement management structure.

At **IBM**, the VP Corporate Environmental Affairs and the VP Global Procurement jointly own the process. Corporate Environmental Affairs reports on an annual basis to the "Directors and Corporate Governance Committee" of the Board. The committee is responsible for reviewing the company's position and practices on significant issues of corporate public responsibility.

At **Nokia**, which has a "matrix" organisation, the issues are reported to the Board through the business units and through the corporate functions that operate across all units. In each business unit, a supply chain officer co-ordinates the management of social and environmental issues. At the corporate level, an Executive Vice President is responsible for environmental and social issues.

Philips' Board of Management and its Sustainability Board have both evaluated the supply chain management policy for which responsibility rests with the Chief Procurement Officer and product division management.

"Ensuring clear lines of accountability up to the Board or Executive Committee is a fundamental element of good practice and is an indicator both of the level of commitment of the company and the effectiveness of its management and internal control structures."

Dimension 2: Policy

Where the Board identifies a significant social or environmental risk or opportunity, best practice is to articulate a clear policy statement or code of conduct. This is important both as a management tool and as a communication tool for internal and external stakeholders. It is not sufficient to make a broad corporate commitment to general principles without spelling out expectations with reference to specific international standards. For example, in the case of labour practices, good practice policies or "codes of conduct" should reference the ILO Conventions or equivalent.

Good practice criteria

Does the company have a policy on labour issues in supply chains?

Yes, policy covers compliance with local law and ILO Conventions– score 3
Yes, covers some issues but is incomplete – score 2
No – but policy is planned – score 1
No – no policy planned – score 0

Does the company have a policy on environmental performance of suppliers?

Yes, policy covers compliance with local laws and requires that suppliers operate an environmental management system – score 3
Yes, covers some issues but is incomplete – score 2
No – but policy is planned – score 1
No – no policy planned – score 0

With regard to labour standards:

- Seven out of the eleven companies have Codes of Conduct which set specific standards for suppliers.
- However, only three of these codes are comprehensive, covering compliance with local laws and ILO Core Conventions.
- One company has made a broad corporate commitment, but is yet to define specific standards.
- Three companies do not appear to have any specific policies covering labour practices in their supply chain.

With regard to the environmental issues:

- Ten out of the eleven companies have a clear policy which requires suppliers to comply with local law and to operate an environmental management system (EMS).
- Under these policies, suppliers are generally not required to have their management system externally accredited under ISO 14001 but must have documented evidence of a robust system.
- The remaining company states that it 'encourages' suppliers to have an EMS, but does not require them to do so. Specific requirements may be built into individual contracts.

A key issue is how policies and codes of conduct are communicated within the business and beyond. A particular concern is the extent to which suppliers and sub-contractors are made aware of codes and required to implement them. A key challenge is to set out expectations very clearly in language that is accessible to suppliers.

Another issue is the extent to which company codes send common messages to suppliers. While some differences in emphasis are to be expected across companies, conflicting requirements can be frustrating and costly for suppliers. Experience from other sectors also indicates that a consistent message allows purchasers to increase their leverage by drawing on each other's purchasing power. Companies may therefore benefit from introducing a degree of co-ordination and information-sharing in the development of policies and codes.

Box 6B

Examples of good practice

Electrolux has a comprehensive Workplace Code of Conduct which can be downloaded from its website and covers compliance with local law, child labour, forced labour, health & safety, non-discrimination, harassment and abuse, working hours, compensation, freedom of association and the right to collective bargaining as well as compliance with specific environmental standards. The Code of Conduct applies to all locations and units within the **Electrolux** Group and to suppliers. The Code states that it is the responsibility of suppliers to ensure that any subcontractors comply with the Code. Suppliers need to demonstrate compliance with the code as a condition of doing business with **Electrolux**.

Motorola's Business Conduct Expectations for Suppliers defines a set of expectations which are based on **Motorola**'s "Key Beliefs" and stipulates that, as a condition of doing business with **Motorola,** suppliers must conform to these expectations and endeavor to have their sources in the supply chain do so as well. **Motorola** assesses suppliers and takes into account compliance with their Business Conduct Expectations for Suppliers when making sourcing decisions. All key compliance issues are introduced in the first paragraph (anti-corruption; unfair business practices; anti-discrimination; humane treatment of workers; freedom of association; working hours and wages; safe and healthy working conditions; and environmental sustainability) and then spelled out individually in subsequent paragraphs.

Dimension 3: Capacity building and training

Capacity building and training are key elements of effective implementation. Company staff, particularly procurement professionals, are increasingly required to undertake new and unfamiliar tasks such as identifying suppliers with poor social and environmental performance. This requires both formal and informal training to ensure that they have the necessary skills and knowledge.

Suppliers themselves are also confronting very new issues, and technical assistance from their client companies in the form of awareness-raising and even formal training can be critical in helping them to progress.

Good practice criteria

Does the company provide training on labour issues in supply chains?

Yes, training for relevant staff plus some assistance for suppliers - score 3
Yes, but no assistance for suppliers – score 2
Yes, some awareness-raising for staff, no specific skills training or training planned – score 1
No training provided – score 0

Does the company provide training on environmental issues in supply chains?

Yes, skills training for relevant staff plus some assistance for suppliers - score 3
Yes, but no assistance for suppliers – score 2
Yes, some awareness-raising for staff, no specific skills training or training planned – score 1
No training provided – score 0

With regard to labour standards:

- Four companies state that they are training employees who work with suppliers and also offer some training to suppliers.
- One company states that it provides basic awareness-raising for some employees.
- Two companies state that training is currently under development.
- Four companies do not offer any training at all, nor have indicated plans to introduce it.

With regard to the environmental issues:

- Five of the eleven companies state that they carry out training for their own staff and offer some form of technical assistance to first tier suppliers, normally in the form of seminars, sharing of best practice etc.
- Two companies offer training for specific employees, but no assistance for suppliers.
- Four companies offer awareness raising for some employees, or state that this is under development.

The recipients of training differ across companies depending on the allocation of responsibilities and company structures. For example, at **Sony**, training is provided for procurement staff since they are responsible for carrying out supplier assessments on environmental issues. At **IBM**, procurement staff are trained to decide when there is a need for an environmental audit and so do not require the same level of training. In-house specialist auditors are brought in to conduct the audits where a need is identified. The company has work underway to establish a similar process for social audits.

In addition to formal training, an important issue is the extent to which companies make information and advice available on demand to both employees and suppliers. Some companies, for example **HP**, have developed extensive internal websites through which staff can access detailed data and raise questions. **Electrolux**, as part of developing a management procedure to implement the code, plans to draw up a more specific set of guidelines to delineate what each commitment of its Code means in practice and to communicate this to its suppliers. **Nokia** trains relevant staff both in environmental and labour issues. Employees have access to detailed environmental information on internal and external websites, and environmental issues are part of management training. In addition, some assistance is available to suppliers.

Emerging issues for discussion

"Whistle-blowing" systems

One important issue is the extent to which staff and external parties feel able to raise concerns and draw attention to non-compliance with codes and policies. Emerging good practice from other sectors suggests that it is helpful to establish confidential "whistle-blowing" systems to facilitate this. In line with new legislation, such as the Sarbanes-Oxley Act, the existence of these systems will also become a legal compliance issue. Experience shows that creating these systems and a responsive corporate culture are not an easy task, but companies stand to benefit not least from prevented fraud or negative publicity.[62] We have not included this aspect of corporate performance in our benchmarking study. However, **Dell** specifically mentioned that "Whistle blowing procedures are in place both for severe and non-severe issues. Supply management run a capture process."[63]

Performance management

Another important aspect of effective implementation is the integration of social and environmental objectives into performance management systems including remuneration and other rewards. A key step is identifying relevant Key Performance Indicators (KPIs) that can be used to assess individual contributions and performance. To date, no company has reached this point, although **Philips** is working with its external verifier to identify KPIs for this purpose. **Philips** already bases a considerable part of rewards on non-financial performance for the top 8,000 managers and plans to roll this out to other staff.

Coordination across the business

A further dimension is the process of co-ordination across the business. This can be very challenging and while most companies like to delegate responsibility to relevant business units, they generally have full-time CSR teams or managers to co-ordinate the process. One example is **Nokia**, where supply chain officers co-ordinate the management of social and environmental issues, but are supported by a corporate CSR team and an environmental team.

62 ISIS believes that this is an important issue and has partnered with TRACE, a Washington-based not for profit organisation working on bribery and corruption issues with business, and the International Business Leaders Forum (IBLF) to review company experiences in implementing these systems. The study will be published in Q1/ 2004.

63 ISIS Interview with Pat Nathan, Director CSR at Dell, 17th October 2003.

Dimension 4: Monitoring

In order to manage social and environmental issues effectively, companies need strong systems to monitor supplier performance. This is important in terms of identifying high risk areas and tracking performance over time.

Good practice criteria

Does the company monitor its suppliers on labour issues?

Yes, first tier/ high risk suppliers audited – score 3
Yes, some audits, predominantly desk-based – score 2
Yes, starting to introduce audits and/or monitoring programme for labour practices – score 1
No, no monitoring – score 0

Does the company audit is suppliers on environmental performance?

Yes, first tier/ high risk suppliers audited – score 3
Yes, some audits, predominantly desk-based – score 2
Yes, starting to introduce audits and/or monitoring programme for environmental practices – score 1
No, no monitoring – score 0

With regard to labour standards:

- Monitoring of supplier performance is in its infancy
- Only two companies have systematic processes in place
- Six companies state that they are starting to introduce audits and their systems are under development
- Three companies do not appear to be taking any steps to monitor supplier performance in this area.

With regard to the environmental issues:

- Four companies operate systematic process for auditing or assessing their first tier suppliers
- Two companies operate a partial audit process
- Four companies state that they are starting to introduce audits and that systems are still under development
- One company does not give any details.

One important aspect is the extent to which companies have a systematic process for identifying risks in their supply chain. This is a vital practical step given the large number of companies supplying any one company (often reaching into the thousands) and the need to prioritise monitoring activity. Examples of indicators cited by companies include:

- Business volume (on average 80% of business volume is conducted with 20% of suppliers)
- Geographical exposure of suppliers to risk such as human rights violations etc
- Brand association, i.e. the extent to which the suppliers' product is easily identified with the brand (e.g. if it carries a brand logo) creating greater exposure to reputation risk
- Degree of manual labour involved in the manufacturing process.

Many companies stressed that first tier suppliers are often themselves large corporates with reasonable CSR credentials and so, by nature, represent a lower level of risk. Although there is no direct commercial relationship between ICT companies and their second tier suppliers,[64] associations between the two can be close; in some instances a second tier supplier may therefore pose a higher risk. However, despite this, companies often have little first hand knowledge of their suppliers beyond the first tier. This is beginning to be addressed in some cases. For example, both **Nokia** and **Philips** include some second tier suppliers in their monitoring programmes, and both **Dell** and **Motorola** are mapping their supply chains to and including 2nd tier.

"Ensuring that supply chain partners agree to comply with a high Social and Environmental Responsibility (SER) standards [is a key business risk]. Providing this assurance for our direct suppliers is a challenge by itself; adding the sub-suppliers throughout the supply chain creates a daunting task." (Ken Larson, HP)

64 Whereas there is a direct commercial relationship between a first tier supplier and a company, second tier suppliers are not directly receiving payment from that company.

Case Study: ST Microelectronics – a first tier supplier

ST Microelectronics is beginning to address social and environmental issues in its own supply chain and has made some significant strides forward, such as establishing lines of accountability and policies for social and environmental issues. However, there are still a number of issues to be addressed particularly around implementation and monitoring.

The company has identified the unknown introduction of a forbidden hazardous material into a product by a supplier as its key social and environmental business risk.

Board accountability and policies

- In June 2003, the company established a Corporate Social Responsibility (CSR) Steering Committee to discuss supply chain management with the goal of developing a policy by the end of 2003. This policy will reference international CSR standards and suppliers will be required to sign a formal letter of commitment to it.
- The company has not set up a designated CSR team and the CSR Steering Committee therefore involves staff from all relevant departments.
- The ETQC (Executive Total Quality Council), comprising 10 Corporate Vice Presidents and chaired by the CEO, has the overall responsibility for supply chain management policies and will address social and environmental issues at its quarterly meetings.
- The company has a policy of encouraging all suppliers to be ISO 14001 certified. To date, 80% of its suppliers have achieved this.
- Due to resource constraints, the company does not have plans to introduce comprehensive monitoring nor to provide suppliers with formal training. However, it intends to make internal training material on environmental issues available to 1st tier suppliers.
- The company's policy on hazardous material sourcing prohibits the inclusion of hazardous substances in the final product they supply, but does not cover the sourcing of material. Suppliers who, for competitive reasons, do not want to disclose all substances must provide assurance that their product does not involve hazardous substances, i.e. sign a declaration which includes a liability clause.
- The company does not yet have a comprehensive Design for the Environment (DfE) policy, but does consider some lifecycle issues.
- While not mandated to do so by the WEEE Directive, **ST Microelectronics** is involved in initiatives with competitors to reduce PFCs and the use of lead. This is in part in response to "top tier" clients concerns.
- **ST Microelectronics** intends to report on its new policy and resulting systems in its sustainability report 2004/ 05.

Another approach is to require 1st tier suppliers to monitor their own suppliers' performance and to report on it. However, as shown above (Case Study p38), resource constraints may prohibit this.

Companies are the first to acknowledge the scale of task ahead of them. **HP**, for example, commented that "ensuring that supply chain partners agree to comply with a high Social and Environmental Responsibility (SER) standards [is a key business risk]. Providing this assurance for our direct suppliers is a challenge by itself; adding the sub-suppliers throughout the supply chain creates a daunting task."[65]

Some companies have chosen to focus their audits on particular issues. For example, many companies have been working on eliminating hazardous substances from their products and have been monitoring this aspect. **This focus reflects the fact that the presence of illegal substances in products represents a key business risk. This point was emphasised by ST Microelectronics (see above).**

One example of a company that is taking a comprehensive approach to this issue is **Sony**. By the end of March 2003, **Sony** had completed environmental audits of all its materials suppliers worldwide, a total of almost 4,200 companies. Successful suppliers achieved 'Green Partner' status and, from April 2003, **Sony** began procuring all its materials, parts and product assemblies from these approved suppliers.

Emerging issues for discussion

Knowing your supply chain
A number of companies highlighted the fact that 2nd tier suppliers can represent a higher level of risk than 1st tier suppliers yet very few have monitoring systems which extend beyond the 1st tier. A key question is whether companies can delegate this responsibility to 1st tier suppliers by requiring them to develop their own supplier monitoring systems.

Integration versus separation?
One issue which emerged from discussions with companies is whether to integrate social and environmental criteria into existing audit processes or to establish parallel monitoring procedures. The advantage of the former is closer integration of social and environmental issues into strategic decision-making; a potential disadvantage is the risk that these issues become side-lined and are not given due attention.

In-house or external auditors?
Another question is the extent to which companies use external auditors or rely on in-house expertise. The latter has the advantage of the "learning effect" being retained in-house rather than with external auditors. Unlike other sectors, such as the garment sector, none of the companies in the sample use external auditors although most companies have obtained ISO 14001 certification. This introduces an element of third party verification as the processes for supplier engagement are externally audited.

65 ISIS meeting with Ken Larson, CSR Manager at HP, 23rd October 2003.

Dimension 5: Follow-up and driving improvement

In addition to monitoring, it is important for companies to have a systematic process for following-up audits and driving improvements where these are needed. Experience suggests that, in the long-term, it is more effective to work with suppliers to help them improve rather than to terminate contracts on the grounds of non-compliance. Effective follow-up can include feedback to the suppliers after monitoring visits have taken place, the development of action plans and checking that agreed corrective actions are being implemented.

Good practice criteria

Does the company have a process for following-up audits of labour issues?

Yes, systematic process including feedback of findings, action plans, follow-up of corrective actions – score 3
Yes, partial, unsystematic process – score 2
Follow up process under development – score 1
No follow-up process – score 0

Does the company have a process for following up audits of environmental performance?

Yes, systematic process including feedback of findings, action plans, follow-up of corrective actions – score 3
Yes, partial, unsystematic process – score 2
Follow up process under development – score 1
No follow-up process – score 0

With regard to labour standards:

- The two companies that are currently monitoring supplier performance specifically state that they are committed to working with their suppliers to achieve continuous improvement. Both companies have a declared process for feeding back information to the supplier and following up non-compliances
- A further five companies either operate *ad hoc* response processes, or say that their processes are currently under development
- Four companies do not appear to be developing processes in this area.

With regard to the environment:

- Four out of the eleven companies state that they have systems in place to feedback assessment/audit findings, to require action plans for improvement and to work together with suppliers to deliver continuous improvement
- Three companies state that findings are fed back, although there is no systematic process. They may work with suppliers to achieve continuous improvement
- Three companies state that their procedures are under development. One further company states “suppliers are expected to make improvements” but does not specify how this will be induced.

The level of intervention varies considerably across companies with some taking a much more "hands-on" approach than others. Some examples are set out in Box 6D below. Factors that influence the level of commitment to this area include resource constraints and perceptions about the boundaries of responsibility.

Box 6D

Different approaches to follow-up with suppliers

Nokia has integrated a broad requirement on labour practices into its overall "Supplier Requirements" document. In the case of non-compliance, **Nokia** adopts the same procedures as for any other breach: the supplier is required to provide a Corrective Action Plan within 30 days. A Corrective Action Report must then be submitted once the corrective actions have been taken. Corrective Actions may also be verified through on-site visits. All suppliers are expected to account for corrective actions.

Sharp ranks its suppliers from A to D using their Green Purchasing Guidelines. Suppliers who achieve a low grade receive a 'Proposal of Improvement' document that they are required to implement. Suppliers who were rated D prior to 2001 were re-evaluated against the Green Purchasing Guidelines to determine whether relevant improvements had been made. Of these, 36.8% of suppliers achieved an A grade, 55.3% achieved a B grade and 7.9% achieved a C grade.

IBM takes a more "hands-off" approach. **IBM** does not have an environmental supply chain policy although it has started to evaluate production-related supplier performance. Where weaknesses are identified, suppliers are expected to draw up action plans without any specific input from **IBM**. On-site suppliers have to comply with **IBM**'s own environmental policy.

"Experience suggests that, in the long-term, it is more effective to work with suppliers to help them improve rather than to terminate contracts on the grounds of non-compliance."

Dimension 6: Disclosure

Transparent disclosure to shareholders and other stakeholders is a key element of good management practice. In this context, best practice involves the public reporting on labour and environmental issues detailing overall strategy, policies, accountability structures, implementation and monitoring systems as well as targets and results. The latter should include, where possible, data on the percentage of suppliers applying social and environmental policies and standards and the percentage of suppliers audited to date. It is also helpful if reports can discuss the context in which the company operates, highlighting the challenges and difficulties that the company faces, and identify the areas where performance fell short of targets and how this is being addressed.

Common practice is to present these data in a separate Corporate Social Responsibility or Sustainability report. However, ISIS believes that, at a minimum, annual reports to shareholders should also reference the key social and environmental issues that potentially pose material risks to the business, and outline key policies and systems for addressing them. This is in line with the Association of British Insurers' Guidelines on Social Responsibility and emerging best practice in other countries (e.g. in the US, companies increasingly incorporate discussions of non-financial risk into their SEC filings).[66]

Good practice criteria

Does the company report openly and publicly on labour issues in its supply chain?

Yes, company reports publicly on policy, strategy, targets and results – score 3
Yes, company publishes policy and broad description of activities – score 2
No, company does not publish its policy relating to labour practices in supply-chains – score 1
No reporting planned – score 0

Does the company report openly and publicly on environmental performance of suppliers?

Yes, company reports publicly on policy, strategy, targets and results – score 3
Yes, company publishes policy and broad description of activities – score 2
No, company does not publish its policy relating to labour practices in supply-chains – score 1
No reporting planned – score 0

66 "Cooking the Books: Scorching the Planet", Report by Friends of the Earth on climate change in US companies SEC filings, published 24th November 2003.

With regard to labour standards:

- Public reporting on labour standards in the supply chain is limited
- Only one company publishes details of its policy, implementation strategy, results and targets on its website
- A further five companies publish their policy, but do not publish any other information
- Five companies do not report on this issue at all.

With regard to the environmental issues:

- Four out of the eleven companies report in detail on their management of environmental issues in the supply chain. This includes their policy, strategy, targets and results
- Four companies include their policy and a broad overview of activity
- Three companies do not publish their policy, but make a brief mention of the fact that they are working with suppliers on environmental issues.

All companies acknowledge that reporting on supply and disposal chain issues needs improving, but stress the difficulty of developing appropriate indicators. It is encouraging that five of the sample companies make a reference to social and environmental issues in their annual report, demonstrating a degree of joined-up thinking.

A further issue is whether reports are externally audited. This can lend credibility to the report, and be a useful tool for ensuring the accuracy and robustness of data. However, conflicts of interest can arise if the same audit firm conducts both the financial and the Corporate Social Responsibility (CSR) audit. Commonly, the latter part is not given the same detailed attention. Four company reports (**Canon, Philips, Sony** and **ST Microlectronics**) contained a statement by an external auditor (SustainAbility, PricewaterhouseCoopers and KPMG). **Sharp**'s report was commented on by a third party, and the company plans to introduce external verification when the auditing process becomes more standardised.

"Open discussion of problems and areas where targets have not been met is likely to engender more trust than focusing exclusively on success stories."
(from the conclusion)

Dimension 7: Product Lifecycle

Companies are facing increasing pressure to reduce the impacts of their products across the entire product life-cycle. Good practice includes incorporating "Design for the Environment" (DfE) principles and working with suppliers on product design and the phasing out of hazardous chemicals.

Good practice criteria

Does the company have a process to reduce the lifecycle impacts of products?

Yes, company takes a systematic approach that includes Design for the Environment, working with suppliers on product design and phasing-out of hazardous substances – score 3
Yes, company incorporates some of the stages of Design for the Environment – score 2
Yes, limited to reactive policy on phase-out of hazardous substances – score 1
No, no approach – score 0

Companies' performance

- All eleven companies state that they operate their own systems for minimising the environmental impact of the product lifecycle, through applying the principles of Design for the Environment and through working with suppliers to reduce the use of hazardous materials.
- All eleven companies also have a track record for developing products with a reduced impact, focusing mainly on reducing hazardous material content and energy consumption during use, as well as improved recyclability.

This is an area of real leadership for the sector. It is notable that most companies have introduced DfE programmes long before they were mandated to do so. The existence of longstanding DfE programmes at many companies demonstrate this. **IBM** emphasises that "it is a misperception that companies are taking design for the environment seriously only since the introduction of relevant legislation. **IBM** established its DfE program in 1991 as part of its overall commitment to protecting the environment. Not only does DfE reduce the environmental footprint of products, it also makes commercial sense. For example, producing energy efficient products can reduce the customers' cost of product ownership."[67]

Like in other industries, companies are beginning to sell service solutions incorporating the use of their products rather than just the product itself. For example, **HP** has developed "product-based services" businesses. "This increases our incentives to design more efficient products, optimise their use, and reclaim them to close the loop. This increases customer value and satisfaction; has less environmental impact….and yields greater profit."[68]

Although all companies scored very well on DfE, there are many challenges ahead. At the highest level, the overall increase in use of IT products means that companies need to continue to innovate if there is to be a net environmental gain. **HP** highlighted some specific challenges:

- Further reducing the energy use of products;
- Anticipating regulatory and market trends that impact design;
- Establishing meaningful metrics to measure product environmental performance;
- Adhering to emerging regulations without fully understanding product integrity and quality implications (e.g. durability of alternatives to lead in solder).

67 ISIS interview with Diana Lyon, Programme director Corporate Environmental Affairs at IBM, 3rd November 2003.
68 ISIS interview with Ken Larson, CSR Manager at HP, 23rd October 2003.

Dimension 8: Take-back and recycling

Companies are similarly coming under increasing pressure to establish systematic take-back and recycling schemes and to issue guidelines for contractors on social and environmental issues. The main driver is legislative (see Box 6F) but other pressures are also being brought to bear. For example, in the US, a group of investors, including ISIS Asset Management, are putting pressure on companies to establish recycling targets and are in active dialogue with **Dell, HP** and **IBM**.[69]

One important issue also coming under public scrutiny is the extent to which companies allow contractors to export electronic waste to developing countries and, where this takes place, how it is monitored. The participating companies are subject to different legal regimes with European companies forbidden from exporting e-waste to non-OECD countries under the Basel Convention. In the US, no specific legislation exists and reports such as "Exporting harm"[70] have highlighted the problem of cross-border waste exports.

Box 6F

Different legislative environments for take-back and recycling

- In Europe, the WEEE directive mandates for responsible disposal;
- In the US, emerging State law such as the SB20 in California addresses recycling, but this needs yet to be tackled at federal level;
- In Japan, the Home Appliances Recycling Law, introduced in April 2000, requires appliance manufacturers to take back and recycle air conditioners, television sets, refrigerators and washing machines.

Good practice criteria

Does the company take active responsibility for take-back and recycling?

Yes, company has a clear strategy with targets for key markets and guidelines for sub-contractors covering social and environmental issues including export of electronic waste – score 3

Yes, high level of involvement in schemes but no clear strategy nor guidelines – score 2

Yes, but company only involved in a few *ad hoc* projects and have no guidelines – score 1

No, action on take-back and recycling at all – score 0

- While all the companies are involved in schemes for product take-back and recycling, only three have a clear strategy with targets for key markets
- Most companies are active but their approach is *ad hoc* and fragmented
- Only three companies have introduced guidelines for contractors on social and environmental issues including the issue of export of e-waste. None of these guidelines are currently public.

69 The Group includes the As You Sow Foundation, Calvert Group, Inc., Dreyfus Corporation, Green Century Funds, ISIS Asset Management, Pax World Funds and Walden Asset Management.

70 "Exporting Harm: the high-tech trashing of Asia", Basel Action Network/ Silicon Valley Toxics Coalition, 25th February 2002.

A key driver for company action on take-back and recycling is legislation with companies concentrating on schemes in countries where take-back schemes are mandatory. Other factors driving company approaches include the existence of recycling partners and relevant infrastructures, the business model adopted (see **Dell** example in Box 6G), differing customer bases and the recovery value of products.

In terms of customer bases, companies highlighted the fact that they run different schemes for different customers with schemes for commercial customers being more advanced. In relation to the recovery value of products, this represents a stronger driver for mainframe companies whose products contain a greater proportion of metal than consumer electronics companies. Mainframe manufacturers have the opportunity to turn this into a revenue generating business.

All companies, to a greater or lesser extent, are working with peers, governments and other stakeholders to help build up supporting infrastructures for take-back and recycling. For example, several companies stressed the value of the Swiss SWICO system, a shared recycling platform, in contrast to running individual programmes themselves. This has reportedly helped to reduce costs, particularly those associated with the logistics of collecting the material for recycling. At an international level, several companies are working together to prepare for the WEEE initiative in Europe (e.g. **Braun, Electrolux, HP, Sony**). Others (e.g. **Motorola, Nokia**) are participating in international projects such as the UNEP/Basel Convention scheme and dialogues with governments (e.g. US state-industry dialogues such as CITA and NEPSI).

Box 6G

Examples of company approaches to take-back

Dell believes that its direct sales model offers greater opportunities for it to track take-back levels and to introduce a systematic recycling programme. Since 2003, it has made commitments to set quantitative recycling targets for desktop and portable computers by March 2004 and to establish a system to track and publicly report on what happens to **Dell** computer components when they are taken back by the company. Through its recently introduced **Dell** Recycling Programme, US customers can donate or recycle used computers. Any brand is accepted and products are picked up at the consumers' residence. The total charge per 50 lbs recycled, including transportation costs, is $7.50. In Europe, a similar service, at no charge, is available with purchase. US and European customers purchasing a new printer can also return their old printer (of any make) to **Dell** free of charge including transportation and recycling.

IBM has take-back schemes in 35 countries (increased from 16) including countries with smaller scale operations. 73 **IBM** locations or suppliers involved in take-back across 35 countries provide quarterly reports to **IBM**. Its Global Asset Recovery Services (GARS) for commercial clients is a revenue-generating service.

Sony has introduced a take-back scheme for computers from business and retail customers. In Japan, **Sony** operates a network of 15 recycling plants and the recycling rate for TV sets is 81%. In Europe, **Sony** operates schemes in five countries where take-back is a legal requirement through third party recyclers. In the US, **Sony** operates a limited take-back scheme. **Sony** pays for the recycling of all own-branded products that have been brought to designated collection points.

A few companies are beginning to confront the issue of export of electronic waste to developing countries making a clear distinction between exports of treated material, which has a residual value and actual electronic waste. Whereas all companies condemn the export of the latter, many companies specifically said they have no objection to exporting the former. In cases where the recycling infrastructure is better in another country, cross-border trade can even be environmentally beneficial. The challenge, therefore, is to determine whether the treatment of these materials is carried out in a socially and environmentally responsible manner.[71]

The fact that companies deal with far fewer suppliers at the product disposal and recycling stage allows for closer monitoring. Following the publication of the two reports by the Silicon Valley Toxics Coalition (SVTC) alleging that multinational companies fail to shoulder the end of life responsibility for the for their products,[72] **IBM** is currently expanding its work with first and second tier recycling contractors. **IBM** is developing a database with the purpose of being able to better track material reuse, recycling and disposal. The expanded assessment programme is to evaluate any situation where a supplier may want to export product end-of-life material to non-OECD countries to ascertain that it is being appropriately, responsibly managed.

Close monitoring requires clear communication of expectations to sub-contractors. Companies, such as **Dell, HP** and **Nokia** have standards that detail expectations of all vendors in the recycling and disposal chain. These standards address the issue of material processing and disposal, and are usually supported by an audit and approval process.

"A few companies are beginning to confront the issue of export of electronic waste to developing countries. The challenge is to determine whether the treatment of these materials is carried out in a socially and environmentally responsible manner."

71 It is notable that none of the European companies have special provisions for their non-European operations regarding the export of waste, nor do they clearly indicate whether European standards are applied globally.

72 See above and "Corporate Strategies for electronics recycling", Silicon Valley Toxics Coalition and Computer Take-back Campaign, June 2003.

Section 7: Conclusion

Conclusions

Very few companies have adopted a strategic and integrated approach to the challenges facing the ICT sector in the supply and disposal chains: only two companies (**HP** and **Nokia**) have shown leadership across all areas. Whereas environmental concerns appear to be firmly on the agenda, the management of labour standards lags well behind that of the environment. Indeed, a number of companies have yet to implement even basic steps, such as introducing labour standards policies on either end of the life cycle chain.

Few would dispute that information technology has enabled some of the most impressive advances in the quest for a more sustainable and socially inclusive society. Perhaps most significantly, its innovations have paved the way for substantial reductions in energy use from travel, as well as breaking down communication barriers for disadvantaged groups, such as the disabled, the geographically isolated and others.

Yet while the sector's contributions are widely heralded, it is coming under pressure both to improve the conditions of workers in its supply chains and reduce the environmental footprint of its manufacturing and disposal processes. This is fuelled by growing recognition that, despite its "clean" image, substantial elements of the ICT supply chain are low-tech, labour intensive and potentially unsafe. Concern has also mounted about the accumulation of "piles of electronic waste", particularly where this is exported to developing countries such as China. These challenges come at a time when the industry is facing acute pressure to cut costs, having only just regained modest ground after a bruising slump in 2001.

This study, covering twelve leading companies, illustrates just how companies stand to benefit by responding to these challenges. While it stops short of quantifying the financial impacts of such action, it highlights how poor performance has the potential to impact the bottom line, not least through damage to the brand. Experience also suggests that properly engaging suppliers can lead to tangible benefits, most notably improved product quality.

Most of the companies surveyed show some evidence of excellence; however, there are still areas of considerable vulnerability, particularly in relation to labour standards. Very few companies have adopted a strategic and integrated approach, and only two companies (**HP** and **Nokia**) have shown leadership across all areas. Significantly, a number of companies have yet to implement basic steps, such as introducing policies covering labour standards. The performance gap between environmental and social areas (e.g. **Sharp**, who is in the leading group on the environment but on the "starting grid" for labour standards) illustrates quite clearly that the environment has featured much more prominently than labour standards on company radar screens.

The sector, therefore, faces a number of important challenges, which all ICT companies would be well advised to address. ISIS research concludes that they should:

- **Take a forward-looking and strategic approach,** with explicit policies and lines of accountability to the Board or Executive Committee;

- **Adopt comprehensive management systems aimed at embedding policies** through tangible objectives, procedures and targets, integration into performance review systems and relevant training;

- **Take steps to "know" their supply and disposal chains:** this is no small task, given the numbers and geographical dispersion of suppliers and contractors. Key to success is having an effective risk assessment process to identify high risk sites;

- **Communicate objectives clearly to suppliers and work with them** to identify and address areas for improvement;

- **Be open about the state of play,** with transparent disclosure of policies, objectives and performance, to shareholders and other stakeholders. Open discussion of problems and areas where targets have not been met is likely to engender more trust than focusing exclusively on success stories;

- **Learn from other sectors** that are more advanced in tackling some of these issues, so as not to 're-invent the wheel';

- **Collaborate with peers** in the sector to help align policies and so avoid placing conflicting demands on suppliers and contractors. Recycling is an area where the benefits of co-operation are especially evident.

ISIS recognises the complexity of these challenges, and calls on companies to take urgent action and address these important issues.

Appendix I - An introduction to oil palm[7]

Scoring system

Company performance is scored against key indicators of engagement with the issues, using the following scoring process:

Managing environmental and labour issues in supply chains

1. Board accountability

Is there a senior manager with responsibility for labour issues in supply chains?

Yes, specific Director with responsibility at Board Level – score 3
Yes, co-ordinator reports directly to Board - score 2
Yes, co-ordinator does not report directly to Board – score 1
No, no defined responsibility – score 0

Is there a senior manager with responsibility for the environmental issues in the supply chain?

Yes, specific Director with responsibility at Board Level – score 3
Yes, co-ordinator reports directly to Board - score 2
Yes, co-ordinator does not report directly to Board – score 1
No, no defined responsibility – score 0

2. Policy

Does the company have a policy on labour issues in supply chains?

Yes, policy covers compliance with local law and ILO Conventions– score 3
Yes, covers some issues but is incomplete – score 2
No – but policy is planned – score 1
No – no policy planned – score 0

Does the company have a policy on environmental performance of suppliers?

Yes, policy covers compliance with local laws and requires that suppliers operate an environmental management system – score 3
Yes, covers some issues but is incomplete – score 2
No – but policy is planned – score 1
No – no policy planned – score 0

3. Capacity building and Training

Does the company provide training on labour issues in supply chains?

Yes, training for relevant staff plus some assistance for suppliers - score 3
Yes, but no assistance for suppliers – score 2
Yes, some awareness-raising for staff, no specific skills training or training planned – score 1
No training provided – score 0

Does the company provide training on environmental issues in supply chains?

Yes, skills training for relevant staff plus some assistance for suppliers - score 3
Yes, but no assistance for suppliers – score 2
Yes, some awareness-raising for staff, no specific skills training or training planned – score 1
No training provided – score 0

4. Monitoring

Does the company monitor its suppliers on labour issues?

Yes, first tier/ high risk suppliers audited – score 3
Yes, some audits, predominantly desk-based – score 2
Yes, starting to introduce audits and/or monitoring programme for labour practices – score 1
No, no monitoring – score 0

Does the company audit is suppliers on environmental performance?

Yes, first tier/ high risk suppliers audited – score 3
Yes, some audits, predominantly desk-based – score 2
Yes, starting to introduce audits and/or monitoring programme for environmental practices – score 1
No, no monitoring – score 0

5. Follow-up/ Driving Improvement

Does the company have a process for following-up audits of labour issues?

Yes, systematic process including feedback of findings, action plans, follow-up of corrective actions - score 3
Yes, partial, unsystematic process – score 2
Follow up process under development – score 1
No follow-up process – score 0

Does the company have a process for following up audits of environmental performance?

Yes, systematic process including feedback of findings, action plans, follow-up of corrective actions - score 3
Yes, partial, unsystematic process – score 2
Follow up process under development – score 1
No follow-up process – score 0

6. Disclosure

Does the company report openly and publicly on labour issues in its supply chain?

Yes, company reports publicly on policy, strategy, targets and results – score 3
Yes, company publishes policy and broad description of activities – score 2
No, company does not publish its policy relating to labour practices in supply-chains – score 1
No reporting planned – score 0

Does the company report openly and publicly on environmental performance of suppliers?

Yes, company reports publicly on policy, strategy, targets and results – score 3
Yes, company publishes policy and broad description of activities – score 2
No, company does not publish its policy relating to labour practices in supply-chains – score 1
No reporting planned – score 0

Managing key environmental issues in supply and disposal chains

7. Product Lifecycle

Does the company have a process to reduce the lifecycle impacts of products?

Yes, company takes a systematic approach that includes Design for the Environment, working with suppliers on product design and phasing-out of hazardous substances – score 3
Yes, company incorporates some of the stages of Design for the Environment – score 2
Yes, limited to reactive policy on phase-out of hazardous substances – score 1
No, no approach – score 0

8. Take-back

Does the company take active responsibility for take-back and recycling?

Yes, company has a clear strategy with targets for key markets and guidelines for sub-contractors covering social and environmental issues including export of electronic waste – score 3
Yes, high level of involvement in schemes but no clear strategy nor guidelines – score 2
Yes, but company only involved in a few *ad hoc* projects and have no guidelines – score 1
No, action on take-back and recycling at all – score 0

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