

McSence Limited

Research Report Computer Recycling & Best Practice

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McSence Recycling Survey Analysis

Introduction

McSence Limited contracted with Edinburgh Environmental Partnership to research and produce a computer recycling Good Practice Guide for Edinburgh and the surrounding areas. This was particularly in view of new European Legislation, The Waste Electrical and Electronic Equipment Directive (WEEE) which came into force January 2003 and that will have implications for all organisations handling computer equipment.

The research was intended to explore the practices companies are currently using and whether those methods were compliant with legislation and environmentally sustainable. The programme involved the collation of information on what is happening on the ground as well as an academic assessment on best practice models

It was envisaged that the collation and interpretation of this information would give a clear picture of the types and levels of recycling that are currently taking place and the production of a Good Practice Guide would be a powerful tool for encouraging and promoting environmentally friendly practices, company social responsibility and a greater awareness of current and impending legislation..

The following report details the approach used to undertake the research, the main findings and conclusions.

Methodology

The research programme involved contacting a sample of 200 companies by telephone in the first instance. Of these 65 (response rate of 33%) agreed to participate in a survey. The survey questionnaire focused on computer ownership, reuse and replacement exploring in particular the procedures and policies in place relating to the disposal of redundant computers. A list of the organisations participating can be found in Appendix 1.

Where possible the survey was conducted with the staff member responsible or who was best informed on practices within the company relating to the subject matter. The survey was conducted in two stages.

The initial version of the questionnaire included 9 questions which were responded to by 15 organisations. The questionnaire was later enhanced to include an additional 5 questions. This questionnaire was completed by 50 organisations. The responses have been collated and are attached in Appendices 2 & 3. 28 organisations have agreed to a visit from McSence for a more detailed assessment, if the company is found to be amongst the best practitioners of environmentally friendly practices for computer reuse and recycling.

McSence commissioned SISTech, Heriot Watt University to provide an academic report on computer recycling exploring best practices, the challenges faced by companies, implications of the WEEE Directive and providing recommendations. This report will underpin the recommendations detailed in the Good Practice Guide.

Interpretation of Statistics

The questionnaire in some cases gave respondents the opportunity to select more than one possible (e.g. Q5). In these cases each response has been calculated as a percentage based on the number of times that specific option had been selected. The totals therefore will not necessarily equate to 100%.

Profile of Organisations

Organisations contacted to participate were mainly large companies with significant computer ownership although SMEs were also approached. The respondents came from all sectors including private, public and voluntary sectors. Of the 65 organisations that participated 50.8% of the organisations questioned had access to more than 100+ computers, 23% between 20 -99 and approximately 17 % and 7.7% owned 6-20 and 1-5 computers respectively.

Question 1 – No of Computers Owned

1-5 Computers	6-20 Computers	20-99 Computers	100+ Computers
7.7%	17%	23%	50.8%

Types of Ownership

There was a high level of computer ownership as apposed to leasing of computer equipment. 95% of the organisations owned the computers being used with only 1.5% of organisations involved in a leasing arrangement. In 3% of cases the companies questioned both owned and leased computers.

Question 4 – Owned or Leased

Owned	Leased	Both
95%	1.5%	3%

Computer Replacement

Computers were more often replaced (37%) than upgraded (29%) and in approximately 71% of cases were usually replaced after 3 or more years of ownership. The responses however revealed that most organisations used more than one method of computer disposal. The two most common methods included **donating** the computers for reuse (47.7%) or recycling (33.8%). In 23% of cases computers were **sold** for reuse or sold for recycling (10.8%). IT equipment was given to a waste disposal company in 29% of cases and in very limited circumstances sent to a waste site (4.6%).

Question 2 – Computers replaced and/or upgraded

Upgraded	Replaced	Don't know/other	Both replaced/upgraded
29%	37%	3%	31%

Question 3 – Frequency of replacement

0 -1 yrs	1-2 yrs	2-3 yrs	3+ yrs
1.5%	4.6%	20%	70.8%

Question 5 Outcome for IT equipment replaced

Sold for repair	Sold for reuse	Sold for recycling	Give for repair	Give for reuse	Give for recycling	Give to disposal co	Send to waste site	Other
4.6%	23%	10.8%	7.7%	47.7%	33.8%	29%	4.6%	15.4%

Data/Equipment Removal

In most cases (81.5%) data held on computers was erased directly by the company prior to disposal. In a limited number of cases the organisation paid a third party agency to cleanse the data (9%) and/or remove the redundant computers (18.5%). In one case where the information held was particularly sensitive, the computers were destroyed in accordance with Government policy.

Question 6 – Data erased prior to disposal

Data Erased	Data not erased	Don't Know	Other
81.5%	6.2%	7.7%	4.6%

Question 7 – Payment for removal of Data and/or Equipment (kit)

Don't pay for data removal	Don't pay for removal of kit	Co. pays for data removal	Co. pays for removal of kit	Don't Know	Other
74%	61%	9%	18.5%	15.4%	4.6%

Environmental Awareness

Most of the organisations questioned did not have an IT purchasing policy that took into account the environment and recycling. In one case an organisation had linked into Dell’s policy as part of the purchasing arrangements.

In 78.5% of cases there was a person in charge with responsibility for disposal and in approximately 29% of cases there was an appointed person dealing with environmental matters. Community affairs however appears to be a relatively low priority with only 21.5% of organisations having appointed someone to deal with such matters. In all cases (except 1) where “community affairs” was a delegated function, it was a part of wider responsibility including disposal and environmental issues rather than an isolated aspect. 20% of organisations had an appointed person responsible for all three areas.

Question 8 – Responsible Person Appointed For:

IT Disposal	Environment	Community Affairs	All of these
78.5%	29%	21.5%	20%

Question 11 – Purchasing policy in place that takes into account the environment & recycling

Yes- policy exists	Policy does not exist	Don’t Know
30%	40%	30%

Reasons for IT Equipment Replacement

The most common reason cited for computer replacement was the need to upgrade software (70%) followed closely by the need for faster computers (66%). In no case were computers replaced for reasons relating to tax savings. Other specific reasons included the need to replace obsolete IT equipment, increase in staffing and technological advancements.

Question 10 – Reasons for replacing IT equipment

Need faster computer	Run out of hard drive space	Need to upgrade software	Computer prices very affordable	Tax savings	Budget will be reduced if don’t use	Other
66%	18%	70%	10%	0%	4%	22%

Disposal Audit Trail

60% of the organisation questioned indicated that they were aware of what happened to their redundant computers following disposal. In those cases where the destination was known, the computers were normally being put back into community use (66.66%) or being handled by a commercial recycler (53.33%). Other specific destinations included giving (or selling) equipment to staff or sending to third world countries.

Formal mechanisms however did not exist in the majority of cases to trace final destination once the equipment left the company. Where an audit trail existed this included the supply of a report by company to whom the computers had been given (e.g. McSence) or production of a destruction certificate.

In **no** case was an organisation aware that its redundant computers were going to be sent to a landfill site.

Question 13 – Is company aware what happens to their IT equipment after disposal

Yes – Company is aware	No – Company is not aware	Don’t Know	Other
60%	20%	18%	2%

Question 14 – If yes (Q13), specify what happens to computers

Put back into community use	Commercial Recycler	Sent to Landfill	Other
66.66%	53.33%	0%	13.33%

Question 15 – Mechanisms to check what has happened to redundant computers once it has left the company

Yes, mechanisms exist	Mechanisms don’t exist	Don’t know if mechanisms exist
10%	76%	10%

Insurance

Most of the individuals participating in the questionnaire either stated that the company had no insurance or were unaware whether the company had taken out relevant insurance to cover possible liabilities relating to residual liabilities and the donation/sale of redundant computers. This may be due to the fact that the person responsible for computer purchase and disposal is not the same individual dealing with insurance matters. It may also be due to the fact that organisations were unaware that there may be legal implications relating to the direct donation and/or selling of used computers.

Question 12 – Insurance for legal liabilities re: donating computers

Company is insured	Company is not insured	Don't know	Other
16%	48%	34%	2%

Best Practice Guide Contents

60% of organisations have requested that **all** the topics suggested for insertion in the Guide form part of the final Guide. This includes:

- Legal responsibilities
- Cost effective methods of disposal
- Data security
- Environmental effect
- Methods of donating
- Residual liability
- List of companies who can reuse, repair and recycle computer equipment.

Other suggestions included: information on where responsibility/liabilities ended when an item is sold or gifted and good practice in computer purchasing. Where organisations selected specific options the most common area requested for inclusion in the Guide was legal responsibilities followed by the environmental effect and residual liability.

It would therefore appear from the responses received that legal responsibility and implications would be one of the key areas of interest.

Question 9 – Information Required for IT Disposal Best Practice Guide

Legal Responsibilities	Cost Effective Disposal	Data Security	Environmental Issues	Methods of Donating	Residual Liability	Companies who recycle Reuse IT	All of these
86%	81.5%	73.8%	81.5%	72%	78.5%	72%	60%

Conclusions for Best Practice Guide

A number of general conclusions can be drawn from the responses received from the survey and the research undertaken by SISTech, Heriot Watt University (See Appendix 4).

There appears to be a level of awareness of computer recycling and reuse with these being the two most commonly cited options for computer disposal. 78.5% of organisations also indicated that there was an appointed person responsible for IT disposal with 60% indicating awareness of post disposal destination of equipment.

Action points include:

1. The need for organisations to incorporate computer acquisition and disposal as part of the overall IT strategy that is fully integrated into the company's asset management objectives and procedures.
2. The need for organisations to consider the policies of manufacturers and suppliers before purchasing computers e.g. take-back policies, upgradeability of components and replacement programmes
3. The need for organisations to have policies which take into account all aspects of the disposal procedure e.g. decision making, implementation and post disposal auditing and monitoring, the environment etc.
4. The need for organisations to communicate effectively it policies and procedures relating to computer recycling and to promote environmentally friendly practices.
5. The need to improve awareness of legal implications and responsibilities in particular in view of the forthcoming implementation of the WEEE Directive as well as more generally the liabilities and insurance needs relating to donation/selling of used computers.
6. To need to provide baseline information on all the areas requested by organisations taking part in the survey i.e. legal responsibilities, cost effective methods of disposal, data security, environmental effect, methods of donating, residual liability, list of companies who can reuse, repair and recycle computer equipment.

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