At Griffith University we are developing a campus wide campaign based on the Sustainability Helix* to combat the growing challenge of electronic waste. This document outlines the process followed at Griffith to uncover all the issues that need to be addressed and may be a useful guide for others interested in addressing the ewaste issue in their institution.

Goverance and Management

Does your institution operate an Environmental Management System (EMS)?
If so, you need to address ewaste in the context of that system only if the EMS is a fundamental part of your institution’s management philosophy and is supported at all levels in the institution.

Does your institution have an environmental statement?
If so, how does the issue of electronic waste fit into the context of this statement?

Does your institution have an Integrated Waste/Resource Management Strategy?
Check with your facilities management staff. If so, what resources are currently assigned to its implementation and does it address electronic wastes?

Does your institution have a specific policy relating to the management of ewaste?
If your institution has an ewaste policy, was it supported from all levels within your institution? Does your institution have a hazardous goods procurement policy that might apply?

How does your institution define ewaste (i.e. operational/non-operational, technical obsolescence, age, asset value)?
This definition can be important. Some definitions in regulations and legislation define equipment becoming ewaste when it is no longer of use to the owner not when it stops working. When addressing ewaste on campus it is important to define and understand which computing equipment you are going to manage in terms of ewaste.

Do you undertake any ‘ewaste accounting’?
If you do not measure it, you can not manage it. Do you have a tracking system for the end-of-life ewaste leaving your institution (i.e. do you know where the waste goes and where your ‘duty of care’ ends)? What computers were disposed of as scrap and where did that scrap go? What amount of electronic waste gets deposited in general waste etc? This is important in determining how big

the problem is on campus and what you can do to effect change quickly as it is unlikely you will be able to solve all the problems in the short term. If you can estimate how much ewaste is generated within your institution and from which areas, you will be in a much better position to identify practical solutions and the impact of any changes.

Do you know the full financial costs associated with this waste stream (i.e. costs of disposal, cost of replacement, refurbishment, IT support etc.)?
You will need this data to develop a business case for alternative disposal solutions and to use as a benchmark to evaluate any responses to tenders.

Are you aware of your legal responsibilities and liabilities for this waste stream in your State?
Are there local government, state or federal regulations or legislation applicable to the disposal of ewaste in your institution (e.g. if old computer parts are regarded as hazardous waste do any hazardous waste regulations apply to the movement of this waste).

Who is responsible for waste/resource management and are they aware of their responsibilities?
Is their training/knowledge adequate to deal with electronic waste issues? What is their influence across the institution? What mechanisms are in-place to ensure that your institution is up-to-date with current legislation and regulations, and best practice (i.e. subscriptions to industry publications, in-house department/personnel)?

Is your institution employing any standards to deal with ewaste?
IEEE 1680 is used to assess the environmental credentials of computer products based on eight categories: materials selection, environmentally sensitive materials, design for end of life, end-of-life management, energy conservation, product longevity and life-cycle extension, packaging, and corporate performance. For more information: www.epeat.net. For the most part, the US has no directives like the European RoHS, which restricts the use of lead, mercury, cadmium, chromium, PBB and PBDE in electronics.

Does your institution have a green procurement policy?
If so, does the policy include provision for energy efficient electronic equipment? Examples of Green Procurement Guides and an example of an Eco Labeling schemes can be found at: http://ec.europa.eu/environment/ecolabel/index_en.htm http://www.epa.gov/osw/elec_fs.pdf.

*For more information on the Sustainability Helix see http://www.naturalezaiproject.net/NAON_ch10.aspx
Operations and Facilities

What do you know, what don’t you know and what don’t you know that you don’t know?
Do you have accurate data relating to electronic equipment on your site(s)? Start by counting the computers as they should be the easiest to find in databases somewhere (e.g. in the asset register in your financial services department). Does your financial system track all electronic equipment within your institution (from desktop and laptop computers to mobile phones)? If so, are they categorised into assets and consumerables? What rules apply with regards to de-registering equipment (i.e. is it only on re-sale or if scrapped or is it based on zero book value etc.). How many computers are disposed of through re-sale, who purchased them and where did they go? When does your tracking systems “lose sight” of electronic items?

What electronic equipment do you actually use?
Can the amount of electronic equipment currently being used be rationalised? Are you storing any old/obsolescent electronic equipment and if so, do you know how much? Can you honestly say that all your computers are in use? One objective to reach to manage ewaste is to make sure all equipment on site is in use or disposed of as soon as possible. The longer you hold it the less value it will have for any subsequent users in terms of resale value or extending the useful life of the equipment. Even in storage it is still counted as electronic waste.

Do you lease or purchase electronic equipment?
Leasing provides many more options for “outsourcing” ewaste disposal through take-back schemes in lease agreements. However terms and conditions will need to be added to ensure that vendors adequately dispose of ewaste once it is taken back.

What existing contracts are in-place for the disposal of electronic equipment?
Do you tender for services to have someone remove old electronic equipment from the campus or do you use the services of a local scrap metal merchant? Remember ewaste is generally defined as being when you have no longer use for electronic equipment – working or otherwise. If you have substantial ewaste tonnage leaving the institution (e.g. 40 PCs with CRTs is roughly a ton) then a special collection contract may be warranted. Have you identified external re-processors for your non-operational or non-commercial ewastes? What are the costs involved (i.e. gate fee, transport)? Have you identified other external markets and opportunities for your operational ewastes? For a starter list of certified organisations got to: http://www.svtc.org/ http://www.ban.org/pledge/Locations.html

Design and Process Innovation

Can the amount of electronic equipment currently required be reduced (i.e. job sharing, working from home, multi-function appliances, use of a centralised printer)?
Because of the falling cost of electronic equipment it is sometimes simpler to buy new equipment rather than looking at your processes (e.g. do you need to buy everyone a work mobile phone if they have their own mobile phone). Are there ways you can reduce the numbers of electronic devices your staff and students need to have? Can you extend the life of your equipment or identify external parties who can use your equipment? Also financial services sometimes remove equipment from the asset register due to its age or when it is fully depreciated even though it is still on campus and still in use. Some electronic items won’t be tagged as assets at all. How will you design processes to ensure that you can track the disposal of electronic equipment on campus when individual items are no longer tracked?

Human Resource Development and Corporate Culture

Does your institution provide induction courses for new employees?
If so does this include resource management advice and guidance on institution policy? Can you include something on how to deal with ewaste and recycling (e.g. location of special bins etc.). How is your institution currently addressing the growing need for knowledge and skills relating to resource consumption (including ewaste)? One of the activities in a collaborative project between The Natural Edge Project and Griffith University is to develop learning materials for schools, universities and corporations in developing sustainable practices which will cover ewaste. These will be completed by Nov 2006 (watch www.griffith.edu.au/ewaste for updates). Do you have a Green Office Guide (e.g. http://www.griffith.edu.au/ofm/sustainability/greenoffice/)?

Does the general culture of the organisation promote sustainability?
Do the employees share the same values and adopt the organisation’s perspectives towards sustainable issues? Will you need a change management program to change the culture to deal with ewaste?

Marketing and Communications

How can the effective management of ewaste (and other resources) effectively strengthen your institution in terms of the marketing?
By effectively dealing with electronic waste are there marketing opportunities or accreditation schemes that you can use? Does your institution currently use any public relations tool to promote your environmental achievements?

Does your institution have an internal marketing plan?
Can you use internal communication channels to get everyone on board to change behaviour within the organisation?

Partnership and Stakeholder Engagement

Have you identified the key internal and external stakeholders groups?
Who has an interest in the lifecycle of electronic equipment on campus? This would include suppliers, financial services departments, IT and AV support, users, facilities management department, scrap metal merchants etc.

Which people at what levels of the organisation in each of these stakeholders groups will need to be involved?
Do you currently use links with industry associations for purchasing, waste management or standards development? Are they addressing ewaste? If not, can they be involved?