

# Statement on Green Information Systems and Technology at UW

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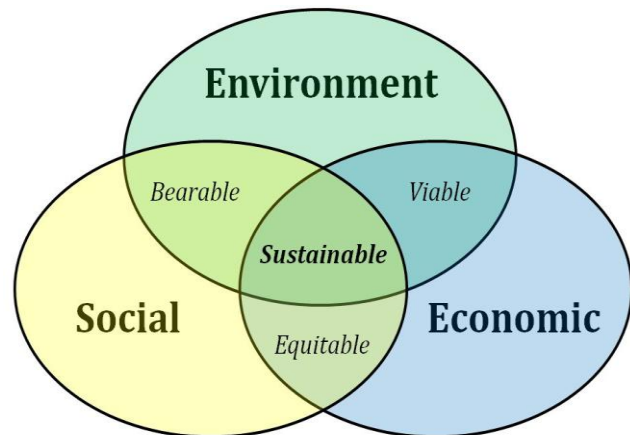
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## Preamble

In a world facing a number of threats to its natural environments, the University of Waterloo accepts its responsibility to create an environmentally sustainable campus community. Consequently, we strive to create a community of users of information systems and technology (IT) that is sustainable where its members embrace principles of Green IT.

*Sustainability* recognises the integration of environment, social, and economic spheres and meets “the needs of the present without compromising the ability of future generations to meet their own needs”<sup>1</sup>. To achieve a sustainable community, IT resources at the University of Waterloo should be socially and environmentally bearable, viable economically without introducing impacts to the environment, and socially and economically equitable and accessible to everyone.



The impact of IT on the environment can be reduced by not just consuming less, but by recognizing and considering the full cycle of production, acquisition, use, and ultimately, the disposal of technology resources and services at UW. By embracing principles of Green IT, we can create and maintain a more sustainable environment.

## Guiding Principles

1. ***We are committed.*** The University of Waterloo community makes extensive use of IT and we recognize our responsibility to minimize our environmental impact while maintaining our high standards in research, teaching, and administrative computing.
2. ***We consider the IT life cycle.*** UW considers the full life cycle of computing equipment and processes, and strives to minimize the overall environmental impact across the life cycle by:
  - i. acquiring computers and services appropriate to the intended use,

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<sup>1</sup> Definition taken from: United Nations World Commission on Environment and Development. (1987). *Our common future* (p. 5). Figure adapted from: IUCN. (2006). *The future of sustainability: Re-thinking environment and development in the twenty-first century*.

- ii. using IT in effective and efficient ways,
  - iii. housing and running IT in spaces and facilities that minimize environmental impacts, and
  - iv. disposing of equipment appropriately, considering ways to reduce, reuse, and recycle.
3. ***We rethink our practices.*** UW commits to constantly rethinking and evolving our computing practices and processes to discover and embrace new opportunities that reduce our collective environmental impact.
  4. ***We all have a responsibility.*** Everyone in the UW community, including students, faculty, and staff, has a responsibility to participate in and improve our evolving green IT strategic processes.
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## Suggested Strategies

Following from the Guiding Principles, the strategies listed below offer suggestions for the sustainable *acquisition*, ongoing *use*, and *disposal* of IT devices. While these strategies might not be applicable under all circumstances, they reflect a commitment to a course of action that can ultimately shift the culture towards more environmentally sustainable practices.

### ***Acquisition of IT Resources:***

*Before* the decision is made to purchase new computing equipment and/or resources:

- consider whether there is a need for new physical devices rather than using virtual systems
- carefully consider and understand the need for the new computing equipment and its end use

Once the decision is made to acquire replacement computing equipment and/or resources, first consider *reusing, recycling, or reducing*:

- depending on the need, check within one's department or unit for available and suitable equipment
- explore the possibility of introducing a programme of equipment exchange within and/or between departments or units
- contact Central Stores about the availability of suitable equipment
- explore the possibility of meeting your needs by refurbishing existing equipment with less environmentally harmful components
- co-ordinate and collaborate with colleagues when purchasing equipment or resources to reduce redundancy

Once the decision has been made to *acquire* new computing equipment and/or resources:

- refer to green purchasing policy through UW's procurement services

- preference should be given to equivalent products that minimise environmental impacts
- consider using new and alternative technologies to address needs for equipment and IT resources
- whenever possible, purchase from ecologically-conscious manufacturers (i.e., those using an efficient manufacturing process and producing equipment and resources that reduce environmental impacts)
- consider the environmental fees associated with the purchase new equipment as described in the Waste Electrical and Electronic Equipment (WEEE) Programme (see <http://www.ontarioelectronicstewardship.ca/>)
- purchase Energy Star® equipment and place a higher priority on equipment with energy-saving devices (see <http://oee.nrcan.gc.ca/residential/energystar-portal.cfm>)
- when purchasing, match equipment to real needs (i.e., computers and other devices should be appropriate for the work that they are intended to support)
- adopt technologies that allow automated reduction in energy use

### **Use of IT Services and Resources:**

With respect to the *ongoing operation* of computing equipment and resources:

- refer to UW green computing web pages<sup>2</sup> for tips on the efficient operation of computing equipment
- implement power management settings on all computing related equipment
- shut down all computing equipment, including workstations, printers, and peripherals at the end of each day or in the case of equipment used only occasionally, at the end of each use
- turn off all idle devices
- for computing workstations, install a shutdown script
- use remote desktop and virtual services where possible rather than operating multiple workstations
- consolidate and centralise computing services to minimise the duplication of servers (e.g., servers for e-mail, web pages, research, storage, and printing)

With respect to *printing and copying*:

- use 100% post consumer recycled paper in all printers and copiers
- promote a paperless office by setting targets to reduce printing and purchasing of printer-related consumables
- encourage the reading of documents on screen
- promote sharing of printers and copiers by groups of users
- when printing is necessary: (1) print and copy on both sides of the paper, (2) reduce the font size and margins to reduce the number of pages, (3) use “draft” quality printing when possible, and (4) print and copy only *necessary* pages

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<sup>2</sup> A list of relevant UW web pages to be included here and regularly updated.

In order to build a *Green IT culture* within each UW department and unit:

- energy efficiency should be promoted by IT support staff by setting up equipment accordingly and educating users on more efficient and effective behaviours
- provide regular reports to departments and units that demonstrate energy reductions and cost savings from embracing Green IT practices
- promote a culture of collaboration in departments and units through the shared use of computing equipment and resources (e.g., sharing server technology through virtualisation)
- the head of each department and unit appoint a representative to encourage Green IT practices and to communicate regularly with other representatives to promote Green IT initiatives

### ***Disposal of IT Resources:***

*Before* the decision is made to dispose of computing equipment and/or resources:

- determine whether it can be re-deployed within the department or unit
- if equipment has been determined to be too old or irreparable, remove and re-use any parts that could fix or upgrade current equipment
- rather than disposing of equipment, send it to Central Stores, where it will be made available for surplus sales or sent out for the recycling of components (see <http://www.greentec.com/>)
- for equipment identified as e-waste by Central Stores, consider opportunities to transfer the equipment to community service centres, schools, and similar public establishments

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