

HKUST Sustainability Guidelines

GUIDANCE FOR STAFF, FACULTY, AND STUDENTS TO IMPROVE CAMPUS SUSTAINABILITY PERFORMANCE



Developed by the Sustainable Operations

Executive Committee

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HKUST Sustainability Guidelines

The Hong Kong University of Science and Technology (HKUST) is a leader in the Hong Kong community, and strives to be a leader in sustainability as well. HKUST's commitment to this idea is articulated in the following sustainability mission statement:

HKUST will become a global leader in sustainability education by transforming the Clear Water Bay campus into a carbon-neutral, zero waste, and net-positive environmental impact living laboratory for experiential learning, demonstrating cutting-edge research and sustainable operations within a vibrant and engaged community.

Based on the premise that many small actions lead to big changes, this document provide a clear set of Guidelines for improving the sustainable operations of departments and offices, and residences across the campus.

How to Use the Guidelines

These Sustainable Office Guidelines are intended to provide simple, yet meaningful instructions for individuals to improve the sustainable performance of their particular space. The guide is segmented into three sections for easy identification:

Sustainable Offices
Green Office Purchasing
Sustainable Events

These guidelines were developed and approved by the Sustainable Operations Executive Committee (ExCo) with the understanding that they are flexible enough to adapt to changing conditions and constructive feedback. Please provide comments and suggestions to green@ust.hk so the guidelines can improve and grow with our HKUST community.



HKUST Sustainable Office Guidelines

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1. The Sustainability Network Representative (SNR)

The **Sustainability Network Representative (SNR)** is the central point of contact on sustainability issues for the office. All offices are required to appoint one person who can assume this role. The responsibilities of the SNR are:

- 1. To become familiar with the details of the HKUST Sustainable Office Guidelines and to present this information to office colleagues.
- 2. To inform new members of the office/department, including faculty, staff and students, of the guidelines and how they are implemented within the office.
- 3. To advance any interesting or relevant information to their colleagues and office-mates, and can serve as a resource to their colleagues if there are questions about HKUST sustainability goals, objectives, or actions.
- 4. To attend quarterly meetings and contribute advice and feedback to other member.

The responsibility for coordinating the SNRs, facilitating meetings, and answering questions is the Sustainability Unit. green@ust.hk

2. Sustainability-Driven Human Capital

People are HKUST's most important resource. Making sure that all members of the HKUST community are healthy, safe, and nurturing work environment is a key to supporting sustainability-minded faculty, staff, and students who can perform at a high level. The following actions are encouraged to develop our human resources in ways that reinforce sustainability goals.



- ❖ Include in the University's statement of values the importance the University attaches to sustainable actions within the workplace.
- ❖ Include sustainability modules within the new employee orientation events.
- ❖ Consider including sustainability practices for performance evaluations so that employees recognize that reducing environmental impacts and conserving natural resources is an element of the job function.
- ❖ Encourage staff to join the HKUST Green Team. Volunteers for the Green Team meet monthly over lunchtime (lunch is included!) to discuss areas of interest on campus and how this network of Team members can share ideas and improve campus conditions.

Any questions relating to developing sustainability-driven human capital can be directed to the Human Resources Office c/o Ms Vivian Lam, Human Resources

Manager (e-mail: hrvivian@ust.hk)

3. Sustainable Use of Materials

The use of materials on campus – and how we treat them afterwards – is a key area where sustainable offices can make a difference. The following guidelines are intended to prioritize the minimization of wastes through specification in contracts, through reuse of materials before purchasing new ones, or other means. Offices are encouraged to adopt the following actions:

- ♦ Reduce printing as much as possible by utilizing electronic resources for filing, forms, communications, and other documentation. (See "Print Tips" at green.ust.hk for more ideas). When it is necessary to print, use 100% recycled paper.
- Ensure that all business cards are printed with recycled content, FSC certified and using soy-based ink printing.
- Purchase appliances with Energy Efficiency Label Grade One, and water appliances that achieve "water Sense" conservation levels.
- Choose environmentally friendly office supplies such as refillable pens, biodegradable garbage bags, eco-friendly souvenirs. Whenever appropriate, buy in bulk to reduce packaging.
- Before buying large items (like new furniture) contact the Purchasing Office to check our green purchasing policies.

Any questions relating to the sustainable use of materials can be directed to Mr

Alan Ng in the Purchasing Office at pualanng@ust.hk



Communicating with colleagues, peers, and students can often place undue burdens on our consumption and waste streams. The goal of these guidelines is facilitate less impact from communications strategies in terms of printing, publishing, displays, handouts, and inter-office communications. Offices are encouraged to adopt the following actions:

- If printing large banners, utilize the water-resistant heavy paper option from PTC as cheaper and recyclable alterative to vinyl banners.
- Consult the Sustainable Printing guide from PTC for tips and suggestions on how to utilize digital printing, reduce wasteful over-runs, and manage supplies in the most sustainable ways.
- ♦ Publish newsletter and promotional materials in e-format to minimize hard copies.
- Send and use e-copies of minutes and agendas for meetings, and utilize document sharing software to reduce the need for printed copies for editing and notes.
- ♦ Eliminate the practice of printing emails.
- Remove all inkjet printers, as they are more expensive, consume more energy, and require more ink cartridges over time than laser alternatives.

Any questions relating to the sustainable strategies for communications and outreach can be directed to Mr. Kenny Fong in the Publishing Technology Center at ptkenny@ust.hk

5. Sustainable Work Spaces

The office workspace is where most of us spent the majority of our time, so it is essential that we set up these spaces in ways that contribute to our ability to use the spaces in the most efficient ways possible. Offices are encouraged to adopt the following actions:

- Establish convenient recycling collection locations with proper signage in the office and separate recyclable (paper, plastic, metal and glass) from general trash. Check periodically to ensure that diverted items are going into the appropriate containers.
- Coordinate with FMO to target areas that do not require cooling during off-hours so that they can be scheduled as such, and share feedback on the temperature control.
- Set up strategies for reducing light levels when natural lighting is available, such as using task lighting, window shading, and placement of desks in ways that maximize the utilization of natural light.
- ♦ Switch off air conditioning after office hour or when staff leaves the room.
- Ensure that all non-essential devices are shut off or in standby mode at night and during



weekends and holidays (copiers, printers, computers and other appliances).

- ♦ Use power strips with individual switches to switch off appliances when not in use.
- ♦ Install a pipe filtration water refilling system to eliminate the use of bottled water.
- Enable sleep mode on all copiers and printers after 5 minutes or more of inactivity; set all computers and screens to go into sleep mode after 10 minutes of being inactive or less. Avoid using screen savers, as they use much more energy than standby mode.

Any questions relating to creating sustainable workspaces can be directed to Mr Jerome Hon at the Facilities Management Office at eojerome@ust.hk or 2358 6431

6. Sustainable Meetings and Events

Conducting university business often requires face-to-face meetings, working meals, content-specific events, and even celebratory receptions. The way we facilitate these meetings and events can create good outcomes in terms of our impacts on waste management. Offices are encouraged to adopt the following actions:

For any events that involve food, please consult the Green Catering Guide to ensure that food waste is minimized and the appropriate facilities units are engaged to separate and remove recyclable items.

- When you order food, ask for reusable cutlery, mugs and tableware to reduce disposable items.
 If disposables are necessary, please request biodegradable materials and ensure that FMO is able to collect the food waste and materials for appropriate recycling.
- Develop a plan for what to do with any left-over food, including the process for donating the food to charities like <u>Food Angel</u> or <u>Feeding Hong Kong</u>.
- When promoting the event, utilize low-impact strategies (such as those in the Sustainable Communications and Outreach section), and consider bags and souvenirs that are reusable and practical to minimize waste.
- Avoid bottled water. Provide tap water or use bulk water dispensers with reusable cups and mugs.

Any questions relating to sustainable meetings and events can be directed to Mr Stanley Sit at the Campus Services Office at kstanley@ust.hk



7. Sustainable Student Support

At HKUST, students are our partners, our part-time workers, our Interns, our "eyes and ears" on the campus, and even our entertainment. It is critical that we make sure students are surrounded by positive examples of sustainable actions, and that they have the ability to participate. All offices that come into regular contact with students are encouraged to adopt the following actions:

- ♦ Include sustainability education in the orientation of new students.
- ♦ Encourage students to only print out course materials if needed.
- ♦ Educate students and societies about organizing sustainable events.
- ♦ Ask students to switch off the lights when they leave the classroom or dormitory.
- Engage students on energy saving, water conservation, reduce waste and support recycling on campus.
- ♦ Encourage students to bring and refill their own water bottle, and coffee mugs.

Any questions relating to sustainable student support can be directed to the Student Affairs Office at saray@ust.hk, tel: 23586658, Mr Raymond Tang, Manager, SAO.



Green Office Purchasing Guide

Contents:

- 1) Green Purchasing Principles
- 2) Setting the tone with suppliers
- 3) General guidance for office purchases
- 4) Definitions
- 5) Guidelines for Specific Items

1) Green Purchasing Principles

The work that occurs in offices at HKUST is critical to the performance of our university, especially in meeting the needs of our teaching and learning community. At the same time, the decisions made on a daily basis can make a huge difference in ability of HKUST to maintaining a more healthy, vibrant, and sustainable campus. The following principles highlight the approach towards purchasing decisions that can result in our positive and desired outcomes.

1. Always focus on health first

There are many attributes of products we buy for office use that may have adverse effects on ourselves and those in our offices. This guide will point out areas where certain products might be avoided, or where alternatives could contribute to a healthier work environment.

2. Reduce the amount of materials, equipment, or supplies

Consider whether the product or service is actually necessary prior to the purchase, or if the existing supplies can be used to meet the need.

3. Focus on the value, not the cost

Often, a product that costs a little more may be much more durable, of better quality, and can contribute over a longer lifespan. Overall, these products save the university money (since they need to be replaced less often) while reducing waste.

4. When purchasing, look for positive environmental attributes

Many products available now have notable environmental attributes compared to traditional choices, and can significantly reduce HKUST's environmental burden. Products that can be reused (instead of those that are disposable) reduce landfill waste; those that are best in class in efficiency reduce energy, water, and greenhouse gases(GHG); and those with eco-labeling or certifications give us confidence that an independent body has verified its valuable contributions.



5. Look beyond the product

Even a similar product might have different impacts based on the way the supplier packages or delivers the product to our university. Consolidating purchases or buying in bulk can reduce transportations impacts, and requesting vendors to reduce packaging can eliminate landfill waste.

2) Setting the Tone with Suppliers

Many of our office purchases have already been negotiated on behalf of the university by the HKUST
Purchasing Office (PURO). This office has a high standard for sustainable purchasing contracts with suppliers, and constantly strives to improve the environmental performance of HKUST by "greening" our supply chain.

However, office at times make purchases independently, or have special cases for buying new products. In these cases, we recommend that offices use these occasions to remind our vendors of our commitment to environmental performance.

In the case that a tender is developed, our Sustainable Purchasing policy asks that we include the following statement:

HKUST is committed to creating a sustainable campus setting where resources are utilized responsibly and all members of the HKUST community have the capacity to thrive within a healthy environment. The specifications detailed in this document are predicated on the expectation that the Contractor respects and supports HKUST's commitment to creating a sustainable campus.

For any other specific questions about the tendering process or the details of the Sustainable Purchasing policy, please contact the PURO at puro@ust.hk. The text of the Sustainable Purchasing policy can be found here.



In this Guide, office purchases are organized into four main categories: (1) Appliances and equipment, (2) general office supplies and stationary, (3) IT equipment; and (4) cleaning or food-related supplies.

1) Appliances and equipment

Most appliances and equipment purchased for the university are evaluated based on their energy efficiency through the Electrical and Mechanical Services Department (EMSD) of the Hong Kong government.

The labelling schemes provide the appliance's energy efficiency



information and grades the appliance's energy efficiency on a scale of 1 to 5, with 1 being the most energy efficient and 5 being the least efficient. The scheme covers household appliances and office equipment including photocopiers, fax machines, multifunction devices, printers, LCD monitors, computers and hot / cold bottled water dispensers, as well as larger appliances such as room air conditioners, dehumidifiers, washing machines, and refrigerating appliances.

The Sustainable Purchasing policy requires that all equipment and appliances meet the EMSD Level 1 performance level.

For products that are not covered with the EMSD labelling scheme, officers are urged to look for products that have earned the ENERGY STAR label from the U.S. Environmental Protection Agency (EPA). ENERGY STAR has grown to represent products in more than 70 different categories, and to receive ENERGY STAR recognition, the product must pass rigorous third–party certification requirements and testing.

https://www.energystar.gov/

2) General Office Supplies and Stationary

The Hong Kong Green Label Scheme is an independent, non-profit and voluntary scheme for the certification of environmentally preferable products launched in 2000 by Green Council. The scheme sets environmental standards and awards its "Green Label" to products that are qualified regarding their environment attributes and/or performance. As with all eco-labelling schemes, the aim is to encourage manufacturers to supply products with good environmental performance and provide a convenient means for consumers to recognize products that are more environmentally responsible, thus promoting a more sustainable pattern of consumption.



3) Office IT Equipment

There are two certification bodies that oversee the types of IT equipment typically used in office settings. For personal IT equipment – such as desktop computers, laptops, tablets, projectors, headsets, and cell phones – TCO Certified is an international third party sustainability certification for these IT products. TCO Certified is a type 1 Ecolabel in accordance with ISO 14024. For other electronics, EPEAT® is a global rating system for evaluating their green attributes. The EPEAT system combines strict, comprehensive criteria for design, production, energy use and recycling with ongoing independent verification of manufacturer claims. EPEAT was developed through a stakeholder consensus process and is managed by the Green Electronics Council, a non-profit organization based in the USA.

For assistance in determining the performance level of individual items, offices may contact PURO or ITSC for further guidance.

In addition to green certifications for IT equipment, it is essential that these items also safeguard the health of the members of our HKUST office spaces. The *RoHS Guide*, also known as Lead-Free, stands for Restriction of Hazardous Substances. It originated in the European Union and restricts the use of six hazardous materials found in electrical and electronic products. All applicable products in the EU market after July 1, 2006 must pass RoHS compliance.

4) Cleaning and Food-Related Supplies

Office spaces are where we live and work, so we place a high premium on keeping these spaces clean and healthy. When cleaning supplies are needed, *Green Seal* offers third-party certification on cleaning products that help protect the natural world and human health. Green Seal Certification is a process that ensures that a product meets rigorous performance, health, and environmental criteria. These criteria are listed as Green Seal Standards. Achieving certification of products helps manufacturers back up their environmental claims and helps purchasers identify products that are safer for human health and the environment.

If offices have any questions about certain products or would like recommendations, they are encouraged to contact the PURO or the FMO Housekeeping departments.

Green events – throughout the year offices hold meetings, facilitate events, have celebrations, and entertain. Many times these activities involve food. Food is an excellent way to make these events successful, and also a great opportunity to help reduce our campus waste going to the landfill. With simple changes – such as using reusable plates and cutlery, requesting compost collection containers, and choosing caterers who comply with HKUST Green events guidelines – offices can enjoy these activities while reducing the university's environmental burden.



Offices can consult the Green Events guide for ideas, tips, suggestions and strategies for reducing waste and increasing environmental performance during office-sponsored events.

4) Definitions

- 1. Chlorinated paraffins- These chemicals are used as plasticizers and flame retardants in rubber, paints, adhesives, sealants and plastics. Short-chain chlorinated paraffins are persistent, bio-accumulative, and toxic to aquatic organisms at low concentrations. They can remain in the environment for a significant amount of time and can bio-accumulate in animal tissues, increasing the probability and duration of exposure. Even relatively small releases of these chemicals from individual manufacturing, processing, or waste management facilities have the potential to accumulate over time to higher levels and cause significant adverse impacts on the environment.
- 2. **Halogenated Substances** Many companies have identified dioxin formation from e-waste containing halogenated chemicals treated in substandard conditions as the most problematic issue and have worked to exclude these kind of substances from their products.
- 3. **Ozone concentration** Xerographic copying and printing equipment generates ozone when high-voltage charging devices produce an electrostatic discharge during a copy run. Ozone has been classified as a pollutant by most regulatory bodies around the world. Concentrations above 0.3ppm can produce headaches, eye irritation and breathing difficulty.
- 4. Alkylphenol ethoxylates (APEOs), phthalates APEOs are surfactants which have an emulsifying and dispersing action, so they have good wetting, penetration, emulsification, dispersion, solubilizing and washing characteristics. They are slow to biodegrade and tend to bio-accumulate. They have been shown to be toxic to aquatic organisms and an endocrine disruptor in higher animals, and therefore they pose a risk to humans. Phthalates (commonly known as plasticizers): The main source of phthalates is the plastisol prints on clothes. Phthalates can be inhaled or ingested by customers and harm to human's development and reproductive system, causing low sperm count in men and infertility in women.
- 5. **FSC Certified-** FSC is a global, not-for-profit organization dedicated to the promotion of responsible forest management worldwide. FSC certification ensures that products come from well managed forests that provide environmental, social and economic benefits. The FSC Principles and Criteria set out best practices for forest management.



1) Paper Shredder

- Product components (circuit boards, electrical, electronic and plastic components) should comply with RoHS.
- Any plastic parts should be manufactured without chlorinated paraffins
 - o flame retardants.
- ♦ Component parts should not contain halogenated substances.

2) General Office Stationery

- The product should comprise recycled raw materials (particularly for the constituent paper fibre and plastics).
- ♦ The product should not be manufactured with dyes, pigments or coatings
 - o that contain mercury, lead, copper, chromium, nickel, aluminium or
 - o cadmium as constituent parts.
- The product should not contain alkylphenol ethoxylates (APEOs),
 - o phthalates or halogenated solvents.

For small amount purchase, you can look for at least one product declaration below:

- ♦ Contain recycled content or material
- ♦ Phthalate-free (無鄰苯二甲酸酯)

*For office supplies such as Notebooks and notepads, envelops, letterhead, name card printing, paper file packets, file boxes, carton boxes, please look for items that are made of recycled paper or paper from sustainable sources such as FSC certified. For printing items, select the printing companies that use soy ink or eco-friendly ink.

3) Writing (pens)

- The product should use refillable ink or refills, and such refill products should be available.
- ♦ The ink should not contain volatile organic solvent, aromatic or halogenated hydrocarbons.
- ♦ Bio-accumulable preservatives should not be used.

For small amount purchase, you can look for at least one product declaration below:

- ♦ Non-toxic
- ♦ The product should use refillable ink or refills, and such refill products should be available.
- ♦ Contain no volatile organic solvent (揮發性有機溶劑)



4) Computers/LDC monitors

- ♦ The equipment should have obtained a Recognition Type Energy Label
- ♦ under the Energy Efficiency Labelling Scheme of Electrical and
- ♦ Mechanical Services Department (EMSD).
- ♦ Obtained energy saving qualification or label like Energy Star Label, TCO, EPEAT certification.
- ♦ Any plastic parts should be manufactured without chlorinated paraffins
- flame retardants.
- ♦ Component parts should not contain halogenated substances.
- ♦ Product components (circuit boards, electrical, electronic and plastic
- ♦ The background illumination for the product should not contain more than
- ♦ 3 mg of mercury per lamp (for LCD monitors).
- ♦ The energy consumption of the product should not be greater than 3W
- ♦ and 1W during sleep mode and off mode, respectively.

HKUST Sustainable Events Guidelines

Events are one of the key areas with great opportunities for waste reduction. In particular, large events produce a significant amount of waste during a short period of time. Examples are Congregation, student society promotion period, orientation camps, large dinners and receptions, and Open Day (Information Day).

These Sustainable Events Guidelines suggest ways to organize and manage the events more sustainably through collective efforts by the departments, offices and student bodies across the campus.

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1. Promotions

Promoting events to other students and colleagues can often place undue burdens on our consumption and waste streams. The goal of these guidelines is to facilitate less impact from communications strategies in terms of printing, publishing, displays, handouts, and inter-office communications. Offices/societies are encouraged to adopt the following actions:

- Reduce printing by utilizing electronic resources for communications. For example, use electronic media for invitations, registration, announcement, updates such as e-card, online form, social media, university e-board. (See "Print Tips" at green.ust.hk for more ideas).
- Make presentations electronically available. Ask participants to bring wireless device to access online documents throughout the event.
- ♦ Design your promotional materials (e.g. banners, souvenirs, leaflets, brochures) in a way that can be reused in the future by department/society, such as avoiding information that can be outdated, design them with precise content.
- When it is necessary to print, accurately estimate the quantity needed to avoid waste.
- Use 100% recycled paper or paper from sustainable sources (such as FSC certified) with soy-based ink printing, double-sided (PTC orders meet these criteria). Consider the newly-introduced product of FSC certified water resistant paper for producing event banner with much lower cost and durable feature with similar performance to the foam board or vinyl banner. Or consider the biodegradable cloth banner option for outdoor decoration.



The use of materials on campus – and how we treat them afterwards – is a key area where sustainable offices/societies can make a difference. The following guidelines are intended to prioritize the minimization of wastes through different means. Offices/societies are encouraged to adopt the following actions:

- Try to get your event materials that are recyclable, compostable or reusable. Avoid using Styrofoam products.
- Choose sustainable decorations. Reuse decorations from past events to reduce waste and decorate in a way that can be easily dismantled and separated for recycling.
- Establish convenient recycling collection locations with proper signage and separate recyclable (paper, plastic, metal, glass, food waste) from general trash. Contact FMO in advance to arrange for the recycling bins and collection. Encourage participants to support separation and recycling during the green event. Helpers or volunteers can be assigned to check periodically to ensure that diverted items are going into the appropriate containers.
- Minimize the give-away and printed materials if they are not vital to the goal of event.
 Communicate message through online channels or information board to reduce wastage.
- Choose practical and environmentally friendly souvenirs such as items contain recycled content, biodegradable, reusable materials. Reduce packaging for individual items.
- ♦ To show token of appreciation to guest/speaker, donation to charity can be an option to reduce materials generated.
- ♦ Check out the HKUST green purchasing policies to identify and support green products.
- ♦ For left-over souvenirs, reuse them in future events or donate to charities/community centers for people in need.

Catering

In many of our events, we arrange catering for the participants. By sustainably consuming the food and materials, we can reduce our impact on the environment. Offices/societies are encouraged to adopt the following actions:

- ❖ For any events that involve food, ensure that food waste is minimized (by ordering the right amount and take home any left-over food).
- When you order food, ask for reusable cutlery, mugs and tableware to reduce disposable items.
 If disposables are necessary, please request biodegradable materials.
- Contact FMO to arrange the recycling bins/stands for caterer use, and recyclables collection



- arrangement. For Food waste, contact CSO for options and arrangement of food waste collection and recycling.
- Develop a plan for what to do with any left-over food, including request to caterer for donation to food charities like Food Angel or Feeding Hong Kong.
- Avoid bottled water. Provide tap water or use bulk water dispensers with reusable mugs for participants and guests. Encourage participants to bring their own reusable bottles to refill.
- Offer vegetarian meal, organic food option. Source seasonal food ingredients from locally grown or neighboring area such as mainland China to reduce food miles of carbon footprint produced during transportation.
- Consider cutting down on the list of items at buffets.

4. Others

There are also other ways that we can organize events sustainably and creatively. Offices are encouraged to adopt the following actions:

- Plan in advance for how to organize the events in a sustainable way. Communicate with all partners and parties in advance. As a leading university, participants will appreciate your effort in contributing to a better environment.
- Choose event venue with natural light and warmth or event hold event outdoor to save energy and light.
- Choose suppliers that provide eco-friendly options to support your green event, locally-sourced materials, or support the social enterprise.
- Communicate with event participants about the green elements and practices of the events to promote a positive brand image and demonstrate as green role model. Promoting and organizing event smartly may also save you money, resources and increase efficiency.
- ♦ Give small token advantages e.g. free drinks/prioritized food to those who bring their own reusable drinking mug/bottle.
- Encourage participants to take public transportation to event venue. Provide public transportation information before the event. Suggest ride-sharing or arrange group transportation from station to venue.
- Promote a healthy and happy lifestyle through your events is promoting sustainability in our community.
- ♦ Turn off all electronic equipment and lights after use or when not in use.

