香港科技大學
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

ENVIRONMENT SOCIAL AND GOVERNANCE REPORT 2023-2024

HKUST Sustainability

CONTENTS

OVERVIEW

In its 2031 strategic plan, HKUST prioritizes becoming an exemplar of best-in-class sustainable and quality practices. With a net-zero commitment being emphasized, the University has published the Net-Zero Action Plan as a strategic guide for HKUST to achieve net-zero by 2045.

In addition, HKUST has been continuing its efforts to meet the 2028 Sustainability Challenge, with a particular focus on community well-being and biodiversity.

This report highlights HKUST's efforts in the 2023/24 academic year and showcases the University's net-zero commitment and its concrete actions.

NET-ZERO COMMITMENT

The Net-Zero Action Plan serves as a strategic guide for HKUST to realize its commitment to achieving net-zero Greenhouse Gas (GHG) emissions by 2045. The Action Plan builds on the University's 2020 and 2028 Sustainability Challenge by offering an essential framework that harnesses the University's research, teaching, and operational capabilities in a way that ensures that HKUST mitigates climate change while pursuing the its mission.

Net-Zero Definition and Target Date

"Net-zero" refers to a state in which the total amount of GHG emitted into the atmosphere is balanced by an equal amount of GHG that have been removed from the atmosphere. The goal for HKUST is to reduce the overall emissions to the greatest extent possible, then invest in carbon removal and sequestration projects to offset the remainder. HKUST has determined that the University shall reach a state of net-zero emissions by the year 2045.

Oversight and Progress Checks

While the ultimate goal is to achieve a level of net-zero emissions by 2045, it is important to have interim goals and targets to ensure the University is on track. The earliest GHG baseline was the year 2014, which became the starting point for the first university-wide sustainability plan (the HKUST 2020 Sustainability Challenge). In 2014, HKUST emitted 61,200 tons of GHG. By 2023, HKUST had reduced emissions by 38%. Further reductions will continue to be difficult due to campus growth, but to remain in alignment with Hong Kong's decarbonization plan, HKUST will cut emissions by 50% to roughly 30,000 tons by 2035. These cuts will be accompanied by comparable reductions in water consumption, waste to the landfill, and overall campus sustainability advances as articulated in each seven-year sustainability plan update (currently the HKUST 2028 Sustainability Challenge).

Responsibility for the Oversight and Stewardship of the Net-Zero Action Plan

Sustainable Operations Executive Committee

(OpCo, existing, VPAB Chair) will be responsible for overseeing the progress and performance of campus operations, new buildings, campus renewal, and adaptation and resilience measures. The OpCo will also be responsible for ensuring that funding and resources are available and allocated measures needed to meet the interim and long-term goals of the Plan.

Net-Zero Education Committee

(NZEC, proposed, Provost Chair) will be responsible for ensuring support is garnered for the development of educational resources and hands-on learning opportunities for students and members of the broader community. The NZEC will also oversee the establishment and facilitation of the proposed Net-Zero Global Alliance to activate campuses around the world as living laboratories for innovation and experiential learning.

Sustainable Smart Campus as a Living Lab

(SSC, existing, DSENG and DSUST Co-Chairs) will be responsible for supporting faculty and alumni researchers who implement proof-of-concept decarbonization interventions on the HKUST campus.

HKUST's Senior Leadership

(G5/G7) will review updates from each of the Committee Chairs on an annual basis (or more frequently) and will inform University Council on progress and performance towards the net-zero target.

Sustainability/Net-Zero Office

(SUST, existing) will serve as the steward of the Plan and will provide the staffing and resources for the Committees above. The SUST will also be responsible for collecting data to measure performance and will report progress in HKUST's ESG annual report.

NET-ZERO COMMITMENT

Five Strategic Areas for Action

To reach the target of achieving net-zero emission by 2045, HKUST shall undertake the following five strategic areas for action:

Path to Net-Zero

The HKUST Net-Zero Action Plan will serve as a strategic guide for HKUST to realize its commitment to achieving net-zero Greenhouse Gas (GHG) emissions by 2045. The Action Plan builds on the University's 2020 and 2028 Sustainability Challenge by offering an essential framework that harnesses the University's research, teaching, and operational capabilities in a way that ensures that HKUST mitigates climate change while pursuing the University's mission.

1 All New Buildings Must Be Designed and Operated as Net-Zero Carbon Buildings

This strategy entails (1) offsetting all embodied carbon from the design and construction process; (2) offsetting all operational carbon emissions from the operations of the new buildings; and (3) implementing cost recovery measures to ensure that carbon offset costs are fully funded through revenue from building-integrated renewables, or through service fees for the building occupants.

2 Invest Aggressively in Energy Conservation, Renewables, and Decarbonization

This strategy entails (1) implementing the Campus Renewal Plan (CRP) to address the most consequential existing buildings on campus in terms of overall improvements and carbon reduction; (2) allocating funding for improvements for buildings, infrastructure, and equipment not covered by the CRP; (3) continuing to invest in the "smart" infrastructure backbone of meters, sensors, monitors, and other data collection and visualization measures; and (4) exploring new decarbonization opportunities on the campus, utilizing the slope, landscape, soils, and waterfront.

NET-ZERO COMMITMENT

Five Strategic Areas for Action

To reach the target of achieving net-zero emission by 2045, HKUST shall undertake the following strategic areas for action:

3 Implement Measures that Allow Us to Adapt and Become Resilient to Climate and Weather Changes

This strategy entails (1) focusing on redundancy of slopes through maintenance and design to ensure their stability; (2) developing measures to protect the coastline from storm surges and rising seawater levels; (3) preparing for extreme heat by developing standards for workers and monitoring systems for airborne illnesses and other stresses on campus biodiversity; (4) adopting measures to reduce the urban heat island effect within the campus to mitigate further heating within the campus microclimate; (5) adopting "sponge city" measures to ensure that when heavy rainfall events occur, the campus can deflect the large volumes of rainwater away from buildings and critical infrastructure; and (6) creating new policies on remote learning, working from home, and flexibility in job functions to flow more easily to flow into alternative work and learning patterns during extreme weather events.

4 Create Viable Pathways to Net-Zero Research and Skill-Building

This strategy entails (1) creating funding pathways for research and implementation of campus-based energy production and carbon removal; (2) establishing a global research alliance of like-minded universities to utilize campuses as living labs for sharing and collaborating on decarbonization solutions; (3) creating course content and hands-on extra-curricular programs to engage students throughout their programs to build sustainability thinking skills and problem-solving competencies; and (4) developing educational resources for the professional staff of the broader Hong Kong community.

5 Create Sensible Cost-Recovery Mechanisms to Fund Decarbonization Actions

This strategy entails (1) implementing the provisions in the ESG Policy for the Long-Term Investment Pool, and review and update on a tri-annual basis; (2) allocating all Feed-in-Tariff revenue (or avoided utility costs) from on-site renewables for decarbonizing new buildings and forming a research pool for on-site decarbonisation research; and (3) implementing cost recovery mechanisms based on the energy intensity (and resulting carbon footprint) of space used by schools and administrative units.

AT A GLANCE - 2028 SUSTAINABILITY CHALLENGE

WATER

10% ↓

in water consumption compared to 2014 baseline and 2% below 2022/23

WASTE TO LANDFILL

47% ↓

in amount of waste sent to landfill compared to 2014 baseline and 4% decrease from 2022/23

9x ↑

in recyclables compared to 2014 baseline and 7% decrease from 2022/23

COMMUNITY WELL-BEING

21% ↓

in Net Promoter Score for academic staff compared to 2022/23

87% ↑

in Net Promoter Score for non-academic staff compared to 2022/23

ENERGY & GHG

34% ↓

in scope 1 and 2 GHG emissions compared to 2014 baseline and 3% increase from 2022/23

4% ↑

in energy consumption compared to 2014 baseline and 3% increase from 2022/23

0.4% ↑

in renewable energy generation compared to 2022/23

LANDSCAPE & BIODIVERSITY

5400 kg

of upcycled woodchips were utilized on campus landscape

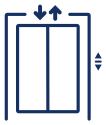
815 kg

of fallen leaves collected on campus were utilized for mulching on campus landscape

KEY ACHIEVEMENTS

ENERGY & GHG

Installed four EV fast chargers, 74 medium chargers, and completed infrastructure provision for 300 parking spaces for medium chargers.



Modernized five lifts, achieving 30% energy reduction for the lifts.

5,842 sets of LED lamps and motion sensors installed with 60% energy reduction; Eight sets of high mast lighting upgraded with LED lights with 50% energy reduction.

Installed an additional 158 kW of solar panels on the rooftops of Shaw Auditorium and staff quarters, representing a 6% increase.

Kicked off the phase two of fumehood monitoring and user engagement, building the data pipeline and producing a dashboard based on real-time data for all fume hoods. The project has saved 25,600 kWh.

Implemented a trial scale of Photovoltaic Integrated Green Roof (PVIGR) on the campus rooftop covering 160m^2.

WASTE TO LANDFILL

Trialed and implemented the Municipal Solid Waste (MSW) Charging Scheme in general offices, laboratories, and student housing.

Enforced an immediate ban on single-use plastics for utensils, plates, straws, or stirrers for both dine-in and takeaway; and banned single-use plastics for food containers or lids and cups for dine-in.

Organized two garage sales with a total of 276 tables, providing the HKUST community with a platform to sell second-hand items, upcycled products, and green products.

Organized two phases of the zero plastic takeaway container pilot program, providing over 130,000 plant-fiber biodegradable containers to the HKUST community through six catering outlets.

Student leaders from the JCSCCP Sustainability Leadership Programme organized an awareness-raising campaign and a clothing reselling platform for the HKUST community, preventing over 600 kg of unwanted clothing from entering landfills.

Converted wood harvested from the Martin Ka Shing Lee Innovation Building construction site into furnitures and art installations in the new student center, as well as 800 souvenirs for guests and contributors of HKUST.

2023-24 KEY ACHIEVEMENTS

WATER

Replaced 180 showerheads in student halls with grade 1 water-efficient showerheads.

Trialed a new thawing method for a catering outlet with an additional pump system, achieving a 33% reduction in water consumption of the thawing process.

Equipped new cooling towers with water-efficient features such as alternative water sources, high-efficiency drift eliminators, and variable speed drive fans.

LANDSCAPE & BIODIVERSITY

Reused 815 kg of on-campus landscaping waste, such as fallen leaves, to produce mulch, and sourced 5,400 kg of wood chips to apply to soil for moisture retention and to reduce the need for irrigation.

Eliminated the use of chemical fertilizers and switched to organic fertilizers to improve the soil content of the campus landscape. 500kg of organic fertilizer was used.

Recruited 70 volunteers from the HKUST community to rescue 128 saplings of native species from construction sites and replant them on campus.

Invited 20 alumni to plant 25 saplings of five different native species in the Upper BBQ Site.

COMMUNITY WELL-BEING

Established the well-being working group to develop a university-wide inventory of well-being data for benchmarking and assessing progress.

Improved space utilization of under-utilised areas through furnishing to promote student wellness.

Deployed a vending machine in a female washroom to provide more accessible female sanitary products for community members.

75 staff members in different schools, departments, and units were trained to provide advice on discrimination and equal opportunity issues.

2023-24 KEY ACHIEVEMENTS

COMMUNITY WELL-BEING (CONT.)

Provided 133 psychoeducation workshops and wellness activities, including mental health first aid courses and suicide prevention gatekeeper training, benefiting over 12,000 students and staff members.

Organized the "From Diversity to Infinity" Festival 2023, reaching over 2,500 individuals and emphasizing the importance of enhancing students' resilience and confronting emotions.

Organized two exhibitions with over 5,000 visitors, promoting the acceptance of mistakes, family harmony, and the exchange of individual insights and coping strategies.

Organized Check-in Day with 3,500 student and staff participants to raise awareness about mental health, promote campus inclusion, and foster stronger bonds within the HKUST community.

Organized two service-learning trips for 30 students to China and Nepal, providing educational programs to over 200 local students with limited learning resources.

Recruited 20 students to join the Student Civic Fellowship, which provided active support to non-profit organizations and social enterprises.

Held the SENtastic Staff Week, attracting over 150 staff members to promote a positive and inclusive environment for students with Special Educational Needs (SEN) and awarded two staff with the 2025 SENtastic award.

Introduced an online training platform for the Peer Support Community, with approximately 1,650 students joining to strengthen connections and mutual support among students.

United over 300 students, alumni, and staff volunteers to participate in Global Service Day, extending the impact of HKUST to 34 community partners.

Completed campus touch point mapping and launched the HKUST chill spaces map, mapping 40 locations for diverse purposes on campus.

GOVERNANCE

Secured the 47th position globally in the QS World University Rankings 2025, underscoring its dedication to academic excellence and research innovation.

Made a notable debut in the Times Higher Education (THE) Impact Rankings, securing the 19th position worldwide and ranking first among institutions in Hong Kong and Mainland China.

2023-24 KEY ACHIEVEMENTS

GOVERNANCE (CONT.)

Published Net-Zero Building Standards to mandate that all new buildings be designed to maximize renewable energy capacity in excess of BEAM Plus standards, and new embodied carbon standards of 500 $kgCO_2/m^2$ or less.

Initiated the Campus Renewal Plan to systematically guide the enhancement of existing buildings, including all feasible decarbonisation measures.

Exemplified sustainability leadership at the Global Sustainable Development Congress, drawing over 3,000 global thought leaders, policymakers, industry executives, and civil society representatives.

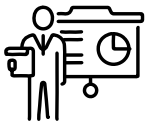
Adopted the reporting framework by the Task Force on Climate-Related Financial Disclosures (TCFD).

Published a Tree Felling & Planting Policy aimed at maximizing the value derived from tree resources. The policy emphasizes the reuse of timber from felled trees and the replanting of native saplings with high ecological value.

Organized the Climate Adaptation & Resilience Conference (CARE) 2024, with a focus on the topic "Surviving the Heat – Research Advances and Resilience Strategies to Urban Heat Extremes". It was attended by a total of 90 students, staff, and external guests.

EDUCATION

Offered Sustainable Design Thinking Certificate Program that brought together 22 students across Hong Kong and Guangzhou to design prototypes addressing campus sustainability challenges.



Developed a Sustainable Course Evaluation Report to enhance the integration of sustainability concepts across its curriculum, 94% of HKUST graduates enrolled in at least one sustainability course.

The HKUST Life Cycle Lab has advanced its vision, offering a comprehensive resource hub and engaging the community through five e-newsletters, five events, four training modules for staff; five training modules and two interactive tools were also developed for building contractors and consultants to support Net-Zero Building Standards.

The Sustainable Smart Campus initiative funded six projects with a total of four million dollars in support and received 504 visitors, along with 39 collaborators.

2028 SUSTAINABILITY CHALLENGE - 2023-24 STATUS

Category	Goal	Status
Energy & GHG	Using the baseline year of 2014: • exceed the Hong Kong Government energy target by reaching a 15% reduction by 2028. • reduce GHG emissions by 40% (scope 1 and 2) by 2028.	Needs attention
Water	Make substantial progress towards UN Sustainable Development Goal #6 — Clean Water and Sanitation by limiting potable water consumption to less than 500,000 m^3 by 2028.	On track
Waste to the Landfill	Using the baseline year of 2014, reduce waste to the landfill by 75% by 2028.	In progress
Landscape & Biodiversity	Utilize the campus landscape as an active resource for research, sustainability experimentation, and community engagement.	On track
Community Well-Being	Establish a framework for measuring progress for the well-being of the campus community in relation to food, lifestyles, and workplace environments.	In progress

Legend

On track - efforts keeping progress on trajectory

In progress - achieveable with additional effort

Needs attention - intervention required or risk of not meeting target

2028 SUSTAINABILITY CHALLENGE - 2023-24 TACTICS

Category	2023 - 24 Tactics
Energy & GHG	1. Improve lighting, equipment, and air conditioning systems incrementally while revising policies to facilitate the equipment. 2. Utilize metering and sensor data for accurate analytics and rapid, predictive changes. 3. Implement high-performance renovation strategies, focusing on windows and building envelope. 4. Adopt LCC and LCA evaluation metrics as standard. 5. Complete Solar project and develop a phase II renewable project that includes non-traditional locations and building integrated technologies. Fast-track Sustainable Smart Campus (SSC) projects as pilots for larger implementation opportunities. 6. Establish a Green Lab Task Force to overcome obstacles to significant changes. 7. Develop a comprehensive 10-year plan to enhance lab efficiency and sustainability.
Water	1. Replace all showerheads in on-campus residency with low-flow models and implement behavior change strategies to induce water-saving actions. 2. Recommission existing underground water tanks. 3. Identify ways to optimize use of rainwater and recycled water.
Waste to the Landfill	1. Reduce the need for and eliminate single-use plastics and non-recyclable disposables. 2. Develop more "sharing economy" opportunities. 3. Emphasize repairing and reuse, and support activities revitalizing equipment.
Landscape & Biodiversity	1. Allocate spaces on campus for utilizing "green" landscape wastes and storage of site-developed compost. 2. Prioritize the use of compost in flower beds as a way to provide natural nutrients to a groundcover that can retain moisture. 3. Experiment with "compost tea" as a way to add natural nutrients to the turf and grassy areas. 4. Collect flora and fauna information from SSC projects to build a public and visible inventory of the natural capital of the campus. 5. Add specific landscape areas and features in the campus tours for incoming students and visitors. 6. Engagement with a contractor to ensure meeting all performance goals to reach incentive benchmark.
Community Well-Being	1. Develop a set of indicators to benchmark happiness and well-being for faculty and staff. 2. Adopt flexible working arrangements by devising policies to cater to the different needs of our staff. 3. Provide career development training and mentoring.

ENVIRONMENT

This year, HKUST continues to strengthen its world-leading position in education, research, and knowledge transfer.

As the University grows, with a 4% increase in students and staff and a 2% increase in Gross Floor area, it has strived to thrive sustainably within planetary resource boundaries through Net-Zero Building Standards that address the net-zero challenges for the University's new buildings and operational improvements.

In addition, the University continues to pilot and put leading technologies into real-life applications to further advance its progress towards 2028 Sustainability Challenge.

ENERGY & GHG — PERFORMANCE

33.9% decrease in scope 1 & 2 GHG emissions compared to the 2014 baseline and 6.5% above 2022/23

51.3% decrease in scope 1 & 2 GHG emissions per capita compared to the 2014 baseline and 3.2% above 2022/23

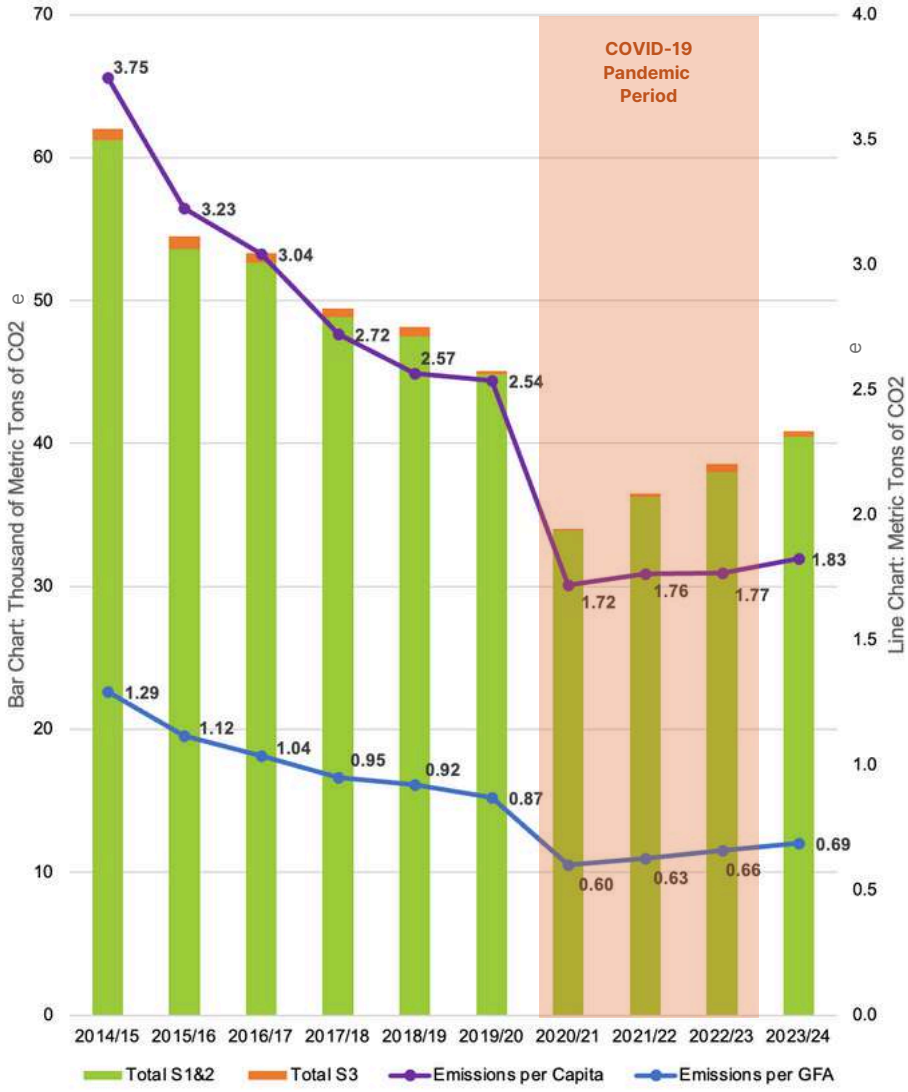
GHG Emissions Overview

As part of the HKUST 2028 Sustainability Challenge, the University has set the target to achieve a 40% reduction in GHG emissions (Scope 1 and 2) by 2028, using 2014 as the baseline year. This year marks the University's first completely operational year after the COVID-19 pandemic, and despite an increase in capita and GFA, 2023/24 saw a decrease in GHG emissions compared to 2019/20.

The 2023-24 academic year continued to show the University's commitment to the 2028 challenge through a 33.9% decrease in total Scope 1 and 2 GHG emissions compared to the 2014 baseline. Subsequently, a 6.5% increase from the previous year was observed. HKUST's Scope 1 and 2 emissions totalled to 40,466 tons of CO_2-e, and this value seems to be following an increasing trend, due to an increase in average temperature in Hong Kong caused the higher usage of the main chiller plant, the inclusion of the Tseung Kwan O Jockey Club Hall in data reporting, and the start of operations for the HPC4 Computing Cluster.

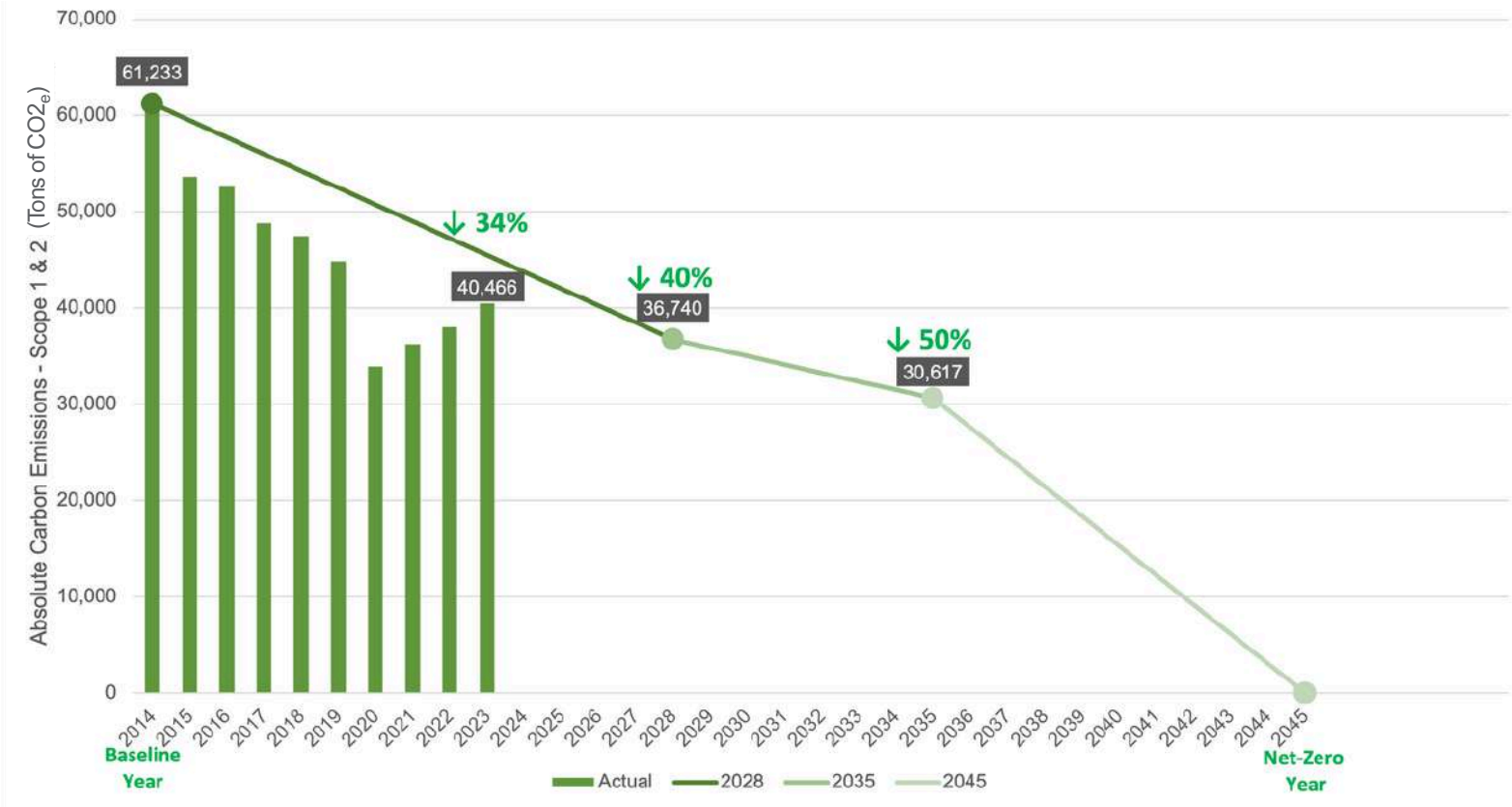
HKUST's Scope 3 emissions for this year were 426 tons of CO_2-e, which is a 23.4% decrease from the previous year. Scope 3 emissions currently encompass indirect emissions from fresh water, sewage water, and paper waste processing, which are adopting the standards set by the Environmental Protection Department (EPD).

Scopes 1, 2, and 3 GHG Emissions Trend at HKUST Over the Years



ENERGY & GHG — PERFORMANCE

Scope 1 and 2 Net-Zero Target Projection



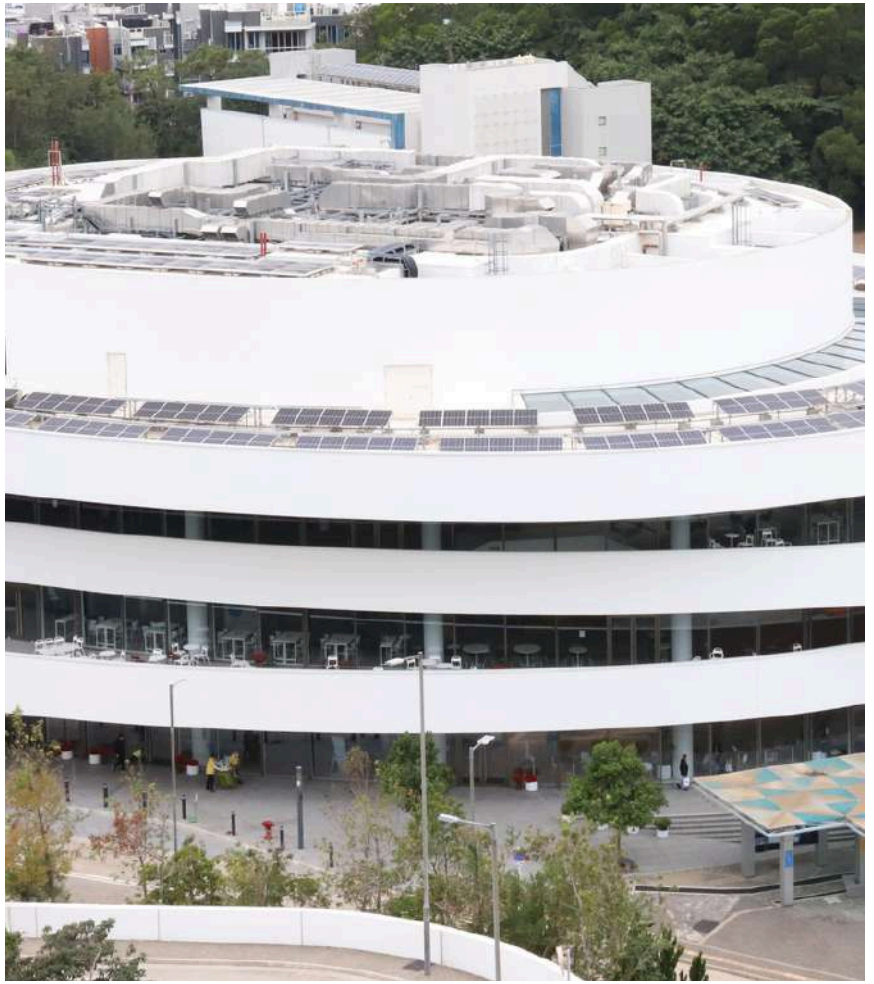
Net-Zero Target Overview

HKUST is in pursuit of net-zero by 2045 and is currently working to reduce carbon emissions in the University's Scope 1 and Scope 2 emissions. HKUST has set near-term targets of 40% emissions reduction in 2028 and 50% emissions reduction in 2035 both in comparison to the 2014 baseline. The University recorded a 34% reduction in GHG emissions in the year 2023 compared to the 2014 baseline.

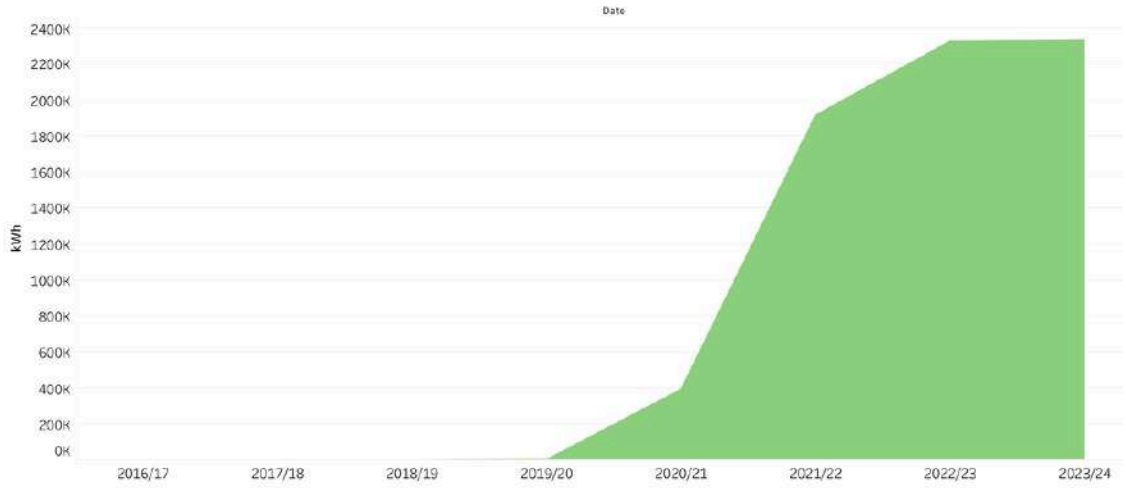
ENERGY & GHG — PERFORMANCE

Renewable Generation

Renewable energy generation has been on a steady rise for the past five reporting years since the installation of 8,000 solar panels in over 50 locations finished back in 2020. To date, a total of 2,473 kW of solar panels have been installed, and it is the largest institutional system of its kind in Hong Kong. This year, an additional 158 kW of solar panels were installed on the rooftops of Shaw Auditorium and Staff Quarters, marking a six percent increase. HKUST's renewable energy generation in 2023-24 has increased by 0.4% compared to 2022-23, with renewable energy equal to 3% of the total electricity consumption. The University has maximized all building rooftop space for solar panel use, resulting in only a slight increase in renewable energy generation.



Renewable Generation at HKUST Over the Years



ENERGY & GHG — PERFORMANCE

2028 Sustainability Challenge - Energy & GHG Goals

Using the baseline year of 2014,

- exceed the Hong Kong Government energy target by reaching a 15% reduction by 2028.
- reduce GHG emissions by 40% (Scope 1 and Scope 2) by 2028.

Category	2023-24 Tactic	2023-24 Progress & Key Activities
Energy Consumption Reduction	Continue with incremental improvements in lighting, equipment, and air conditioning system upgrades. Review and revise policies to facilitate the centralization and sharing of equipment.	• Replaced 5,842 less energy-efficient lighting with LED lamps and installed motion sensors in staircases and corridors, resulting in an average reduction of 60% in lighting energy consumption. • Modernized five lifts with an energy regenerative drive system, resulting in approximately 30% energy savings for lifts.
	Incorporate metering and sensor data for more accurate analytics and ability to make changes rapidly and predictively.	• Introduced an energy consumption monitoring dataset comprising data from over 1,400 meters across more than 20 buildings and collected over two and a half years.
Policies & Standards	Develop high performance renovation strategies to increase performance for every new space retrofit, with an emphasis on windows and building envelope.	• Published the Net-Zero Action Plan to commit HKS30 million to further accelerate research and adoption of innovative decarbonization solutions on campus, and achieve net-zero carbon emission by 2045. • Published the Net-Zero Building Standards to ensure that all new buildings on the HKUST campus will be designed and operated as net-zero carbon buildings.

ENERGY & GHG — PERFORMANCE

2028 Sustainability Challenge - Energy Goals

Using the baseline year of 2014,

- exceed the Hong Kong government energy target by reaching a 15% reduction by 2028.

Category	2023-24 Tactics	2023-24 Progress & Key Activities
Policies & Standards	Promote LCC and LCA evaluation metrics as standard.	• Developed and published four training modules to teach Life Cycle thinking for sustainability. • Developed tools to factor shadow carbon cost into decision making for technology and building materials.
Renewable Expansion	Complete solar project and develop a phase II renewable project that includes non-traditional locations and building integrated technologies.	• Evaluated 25 non-traditional sites for additional solar PV installations as part of Solar PV Phase II assessment. • Installed an additional 158 kW of solar panels on the rooftops of Shaw Auditorium and staff quarters, marking a six percent increase.
Pilot Research Implementation	Fast-track research projects as pilots for larger implementation opportunities.	• Implemented a trial scale of Photovoltaic Integrated Green Roof (PVIGR) on the campus rooftop covering 160m^2 to gather data. • Installed and tested a 200W elastocaloric fridge, and completed the fabrication of a 500W elastocaloric air conditioner which have lower energy consumption than traditional counterparts. • Experimented the Passive Radiative Cooling for Solar PV Frames and Cooling Tower Water Tanks on campus.
Green Labs	Form a Green Lab Task Force to evaluate policies, procedures, space allocation, and current lab practices with the goal of identifying and removing roadblocks to aggressive changes within laboratories.	• Kicked off the phrase two fume hood monitoring and user engagement to build the data pipeline and produce a dashboard based on real-time data for all fume hoods. • Discussion of the policy for Ultra-Low Temperature Freezers procurement.
	Develop a comprehensive plan for refurbishing labs over the next ten years with an emphasis on resource efficiency.	• Completed the Campus Renewal Plan consultancy featuring lab refurbishment plan.

ENERGY & GHG — OPERATION PROJECTS

Electric Vehicle Chargers

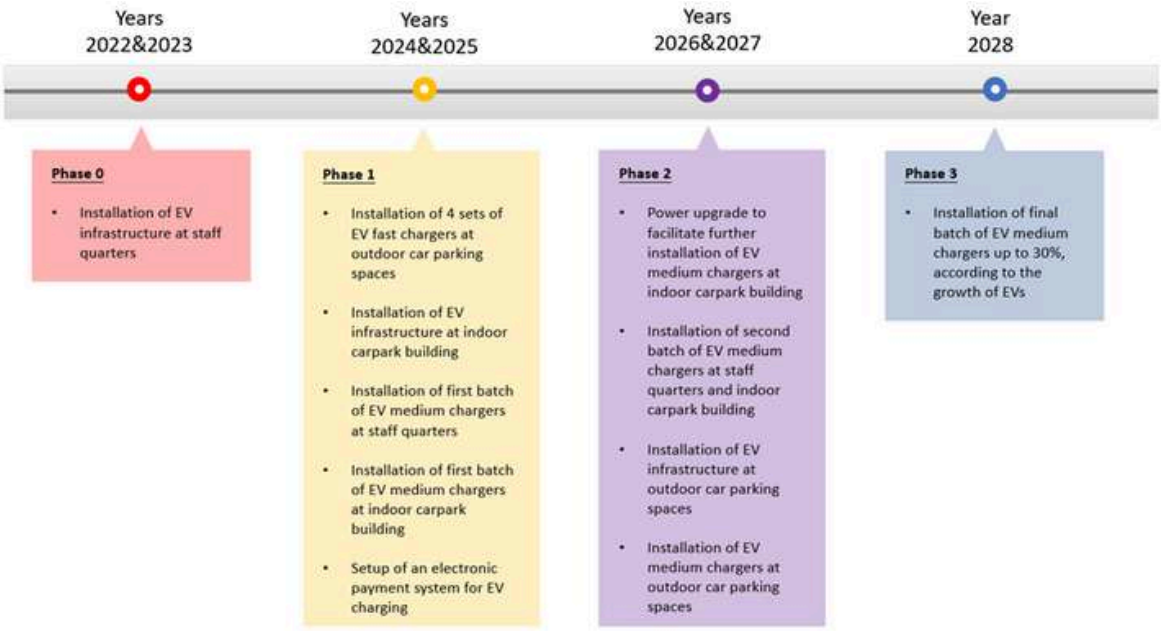
In addition to existing EV charging facilities, HKUST will continue to electrify its fleet of vehicles based on operational needs and market conditions. By April 2024, over 30% of the University's fleet is consist of electric vehicles (EVs), while the remainder will be low-emission hybrid vehicles.

The University is investing up to HK$40 million to upgrade 30% of its parking spaces with charging capabilities and related software support for EVs. This initiative aims to cultivate sustainable commuting habits and supports the emission reduction goals outlined in the HKUST 2028 Sustainability Challenge.

The enhancement project, which commenced in 2022, has already seen the installation of EV infrastructure to support over 150 chargers at staff quarters. Over the next four years, the project will continue to upgrade the power supply infrastructure and install a load management system and EV chargers in both indoor and outdoor parking spaces across the Clear Water Bay campus. Four fast EV chargers were donated by BMW Hong Kong to the University and began trial operations in March.

300 car parking spaces completed with EV infrastructure work for the installation of EV medium chargers

78 new EV chargers in service, including four fast chargers and 74 medium chargers



Lift Modernization with Regenerative Drives

As part of a 10-year plan, five lifts at the Main Academic Building, a student hall, and a staff quarter were modernized this year with the implementation of an energy regenerative drive system, resulting in approximately 30% energy savings for lifts compared to non-regenerative counterparts.

5 lifts modernized

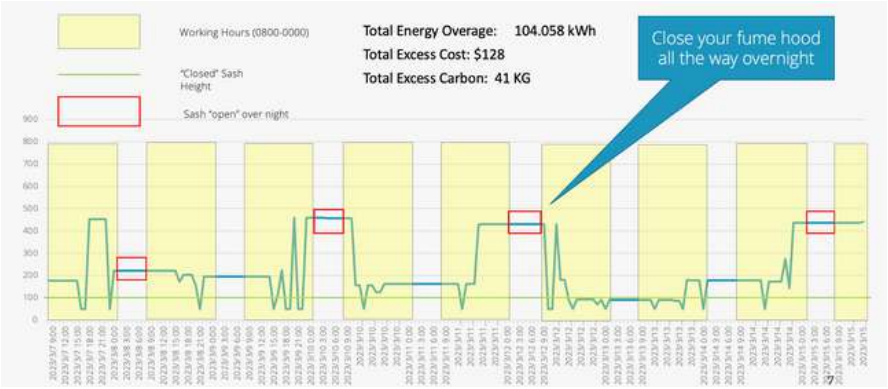
30% reduction in lift energy consumption

ENERGY & GHG — OPERATION PROJECTS

Fume Hood Monitoring and User Engagement

Fume hoods for laboratory ventilation are among the largest energy users on campus, as air is continuously exhausted outdoors to prevent laboratory users from being exposed to hazardous gases and particulates. A joint working group developed a Phase 1 campaign approach, which included weekly sash height reports, selection of the worst average sash height, downloading hourly data from the Building Management System, visualizing overnight behavior, and engaging specific users. During this period, Phase 2 was kicked off, focusing on building the data pipeline and producing a dashboard based on real-time data for all fume hoods, accompanied by user engagement.

From engaging the top 10 worst-performing fume hood users for 6 months, 25,600 kWh of electricity was saved, equivalent to 9.7 tons CO_{2e}- avoided.



25,600 kWh electricity was saved

9.7 tons $CO2_e$ avoided

Extensive LED Light Upgrades

HKUST's lighting upgrade program involved replacing less energy-efficient lighting with LED lamps and installing motion sensors in staircases and corridors. 5,842 lighting fittings were replaced, resulting in an average reduction of 60% in lighting energy consumption.

In the Fok Ying Tung Sports Center, 40 sets of 2,000W floodlights for the 30m high mast lighting were replaced with 40 sets of 1,000W LED lights, leading to a 50% reduction in energy consumption by the LED lights, equating to a decrease of 280,000 kWh per year—nearly three times the solar power generated by the Lee Shau Kee Business Building.

5,842 lighting fittings were replaced

60% average reduction of lighting energy consumption

ENERGY & GHG — OPERATION PROJECTS

Photovoltaic Integrated Green Roof (PVIGR) System

A team of researchers has implemented a trial scale of Photovoltaic Integrated Green Roof (PVIGR) on the campus rooftop covering 160m² to gather data. The project aims to compare different roof configurations regarding photovoltaic efficiency and the ambient micro-environment, utilizing various plant species while employing sensor trees to monitor the micro-environment.

160 **m² of PV panels included in the PVIGR trial**

Feasibility Studies on Energy Reduction Projects

To identify opportunities for energy savings, the University has conducted studies to identify different energy wastage hotspots.

A campaign involving eight offices was launched to investigate the occupancy, cooling, and energy performance of student halls, sports facilities, catering outlets, and the Shaw Auditorium.

Another study focused on overnight computer usage was conducted to collect preliminary data on the number of computers left on overnight. This data will be analyzed to provide valuable insights and recommendations for energy-saving measures. The measures can potentially save 2,900,000 kWh per year.

Finally, the University conducted a study to address the issue of overconsumption of electricity by the Ultra-Low Temperature Freezer (UTF) at HKUST. The objective was to determine real-life energy consumption, create an energy estimate for HKUST, and utilize the data to develop a business case for new policies and funding support. The study revealed that age, efficiency, and environmental conditions contributed to the high energy consumption of the UTFs. By implementing newer and more efficient units, 20% UTF energy savings can be achieved.

3 **feasibility studies on energy reduction projects for laboratory freezers, overnight computing and usage during unoccupied periods were conducted**

ENERGY & GHG — OPERATION PROJECTS

The University's Physical Presence

To strengthen HKUST's world-leading position in education, research, and knowledge transfer, the University commences campus development projects to address short-term, medium-term, and long-term spatial needs. In the near future, it involves setting up a new town facility in Kwun Tong to provide additional teaching and office spaces, and, in the medium term, building new facilities under a Campus Development Plan. In anticipation of the development of HKUST in the next decade and beyond, the institution must take decisive action to acquire and develop off-campus land sites for new initiatives with a lasting impact.

Concurrently, a Campus Renewal Plan will be in place to guide the maintenance and improvement of the existing campus facilities to enhance the campus experience.

HKUST Net-Zero Building Standards

New buildings have two carbon challenges: (1) how can they be constructed in ways that minimize the amount of carbon released during the construction process (also known as "embodied carbon"), and (2) how can buildings be designed so that they minimize additional carbon emissions over its servicable life. Both of these challenges increase the footprint of the campus and make it more difficult to reach the net-zero targets.

Specific strategies for minimizing these emissions are contained within the newly launched HKUST Net-Zero Building Standards. These strategies include a combination of high standards and requirements plus incentives for design teams to act aggressively in reducing carbon in new buildings. These standards set benchmarks for the minimum performance for all new capital projects, major existing building alterations, and additions over 5,000m^2, and have been issued as part of the University's new Research Building 3 tender documents. Accompanying online contractor training modules will be available to contractors and suppliers to further explain its application.

ENERGY & GHG — OPERATION PROJECTS

Campus Renewal Plan

The Campus Renewal Plan (CRP) is a comprehensive assessment of the current conditions of the campus-built environment, accompanied by an action plan for systematically upgrading selected buildings in sequence through 2035.

The CRP adopts an “everything touched” approach, meaning that whenever there is an opportunity to upgrade a space, HKUST must implement all feasible decarbonization measures at that time. This recognizes that major upgrades do not happen frequently, so the University must be opportunistic when chances arise. It also acknowledges that with a limited timeframe for reaching HKUST’s net-zero target, there will not be a second chance to revisit these buildings before 2045.

The CRP focuses primarily on the oldest laboratories, student residence halls, and staff quarters, including a reasonable implementation schedule to complete the work by 2035. Most importantly, the CRP establishes compulsory renovation standards, along with a secondary set of options that may be considered based on available budget and time.

Research Building 2*

Research Building 2 incorporates a range of innovative features designed to reduce energy consumption and minimize environmental impact. The adoption of chilled ceilings in offices represents a significant step toward energy efficiency, offering savings of over 40-50% compared to traditional cooling systems. Additionally, the installation of double self-closing doors in laboratories and double-glazed windows throughout ensures airtightness while enhancing the building's overall energy performance.

The project complements the existing natural green environment on campus by providing shading from tree canopies and an organic layout of soft landscapes and tree planting. Embracing the use of recycled materials in construction, such as green concrete and low-carbon reinforcement steel bars, underscores the University’s commitment to sustainability. The building services incorporate Variable Speed Fans and electronically commutated plug fans for efficient air circulation, along with the installation of 150 solar panels to support power and lighting in the building, further expanding HKUST’s extensive renewable energy network.

*Under construction

ENERGY & GHG — OPERATION PROJECTS

Staff Quarters Tower D

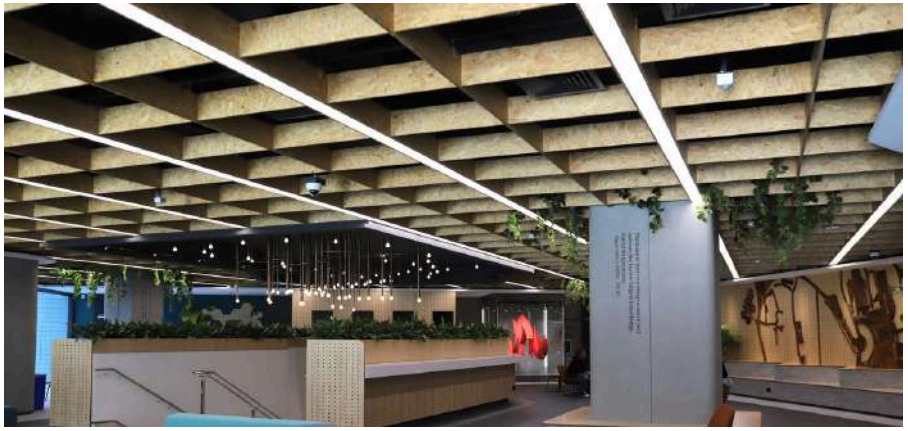
The soon-to-be-completed Staff Quarters Tower D upgrades will pioneer innovative sustainability features, including building-integrated photovoltaics, cool roof paint, concrete blocks with recycled glass materials, dual-flush toilets, improved access to recycling facilities, and enlarged windows for better daylighting. This further enhances HKUST's upgraded standards for staff quarters, which already feature energy meters, LED lighting, Grade 1 water and electrical fittings and appliances, mosquito nets, window grilles, low-emission paint and furniture, and fan provisions. Staff residents will benefit from reduced utility bills and improved well-being.

Student Center

Located near the iconic Red Bird sculpture at the North Gate, the new Student Center is a beautifully designed open learning space that opened in December 2023. The Center reflects HKUST's commitment to sustainability education and innovation, promoting waste reduction, wellness, and student engagement.

The façade features large windows to maximize natural light, reducing the need for artificial lighting throughout the day. To enhance wellness, the design includes strategically placed planters and indoor plants to improve air quality and create a calming atmosphere. With the addition of study cubicles and nap pods, it is an inviting and enjoyable space for everyone on campus.

Touring the Center embodies the genius loci of HKUST. Acacia hardwood, harvested from the site of the new Martin Ka Shing Lee Innovation Building, is used for staircase soffits, benches, and standing tabletops, allowing students to appreciate the natural wood grain. These Acacia trees grew alongside the campus, and reusing the wood in campus projects honors this heritage for future generations.



WATER — PERFORMANCE

10.2% decrease in water consumption compared to 2014 baseline and 1.5% below 2022/23

33.8% decrease in water consumption per capita compared to 2014 baseline and 4.5% below 2022/23

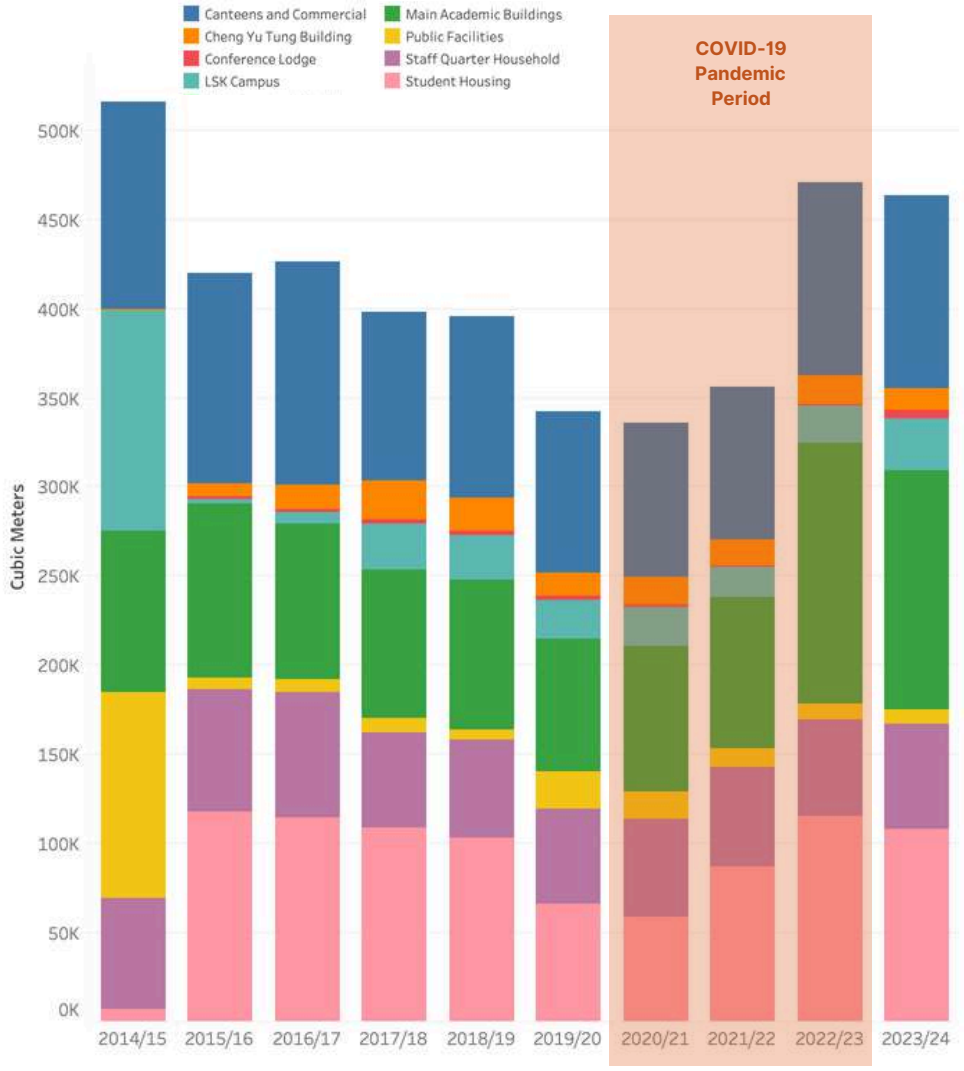
Water Consumption Overview

HKUST commits to the goal of staying below 500,000 cubic meters of water consumption per year with a 10.2% decrease compared to the baseline year and a 1.5% decrease from the previous year. The total 2023/24 water consumption is approximately 463,500 cubic meters.

Despite installing a new cooling tower last year, the University was able to stay below the maximum 500,000 cubic meter target because of improvements in sanitary tap and shower fittings, water conservation education to the HKUST community, and updates in data accounting methods.

Regarding the campus community, there was a 33.8% decrease in total water consumption per capita compared to the baseline and a 4.5% decrease when compared to the previous year. The 2023/24 water consumption per capita is approximately 20.9 m³ of water, equivalent to 41,800 bottles of water.

Water Consumption Breakdown at HKUST Over the Years



WATER — PERFORMANCE

2028 Sustainability Challenge - Water Goals

Make substantial progress towards UN Sustainable Development Goal #6 — Clean Water and Sanitation by limiting potable water consumption to less than 500,000 cubic meters by 2028.

Category	2023-24 Tactics	2023-24 Progress & Key Activities
Water Consumption Reduction	Retrofit all showerheads in staff quarters and student halls with low-flow models. Implement behavior change strategies that nudge residents towards more water savings actions.	• Installed over 100 WELS Grade 1 showerheads in all UG students halls. • Piloted and promoted a water-efficient thawing method for the canteens. • Conducted a baseline study on irrigation water demand. • Installed a drip irrigation system in the community garden.
Use of Non-Potable Water Sources	Recommission existing underground water tanks.	• HKUST Net-Zero Building Standards incorporated requirements for condensate reuse and rainwater recycling.
	Identify ways to optimize use of rainwater and recycled water.	

WATER — OPERATION PROJECTS

Student Hall Showerhead

Student halls are the largest consumers of potable water. To reduce student hall water consumption, the University has procured over 100 Water Efficiency Labelling Scheme (WELS) Grade 1 showerheads, which were installed in all student halls during the 2023-24 academic year.

These water-efficient showerheads helped to reduce water consumption in student halls by 23%.

100 **WELS Grade 1 showerheads procured**

23% **estimated water consumption reduction from student halls**

Pilot Water Efficient Thawing Method

Caterers are the second-largest water consumers at the University. Water is primarily used to thaw frozen meat by directly flushing it for several hours.

The University has completed testing a pump system to aerate the water sink, thus reducing avoidable water consumption. Results indicate that caterers can use 33.3% less potable water per thawing process with the pump system to achieve the same thawing results. Alternatively, caterers may employ the refrigerator thawing method, which takes longer but eliminates water use for thawing.

The test results have been communicated to all campus caterers, recommending the installation of the pump system where refrigerator thawing is not feasible. One caterer has successfully installed an additional pump system for food thawing, and WELS grade 1 tap aerators for all caterers' hand-washing sinks. Furthermore, the University observed a reduction in water thawing in the LG1 Canteen II.

33.3% **water consumption reduction for thawing**

WATER — OPERATION PROJECTS

Baseline Monitoring of Irrigation Demand

Irrigation of planting areas on campus has contributed to potable water consumption; however, data have been insufficient to assess its impact.

Starting this year, HKUST initiated the monitoring of water consumption for irrigation in planting areas, including trees in planter boxes, potted plants, indoor planters, outdoor individual planters, and lawns. Each gardener will be equipped with a water flow meter, enabling tracking of monthly or seasonal changes.

The results will be utilized to assess potential areas for reducing water consumption in irrigation.

Trial of Drip Irrigation System in Community Garden

In a commitment to responsible water consumption, the Community Garden has installed a drip irrigation system that covers half of its plots.

In terms of water application efficiency, as it delivers water directly to the root zone of the plants, drip irrigation achieves 90-95% efficiency, compared to the 60-80% efficiency of traditional hose irrigation, drastically reducing water consumption.

Additionally, drip irrigation helps suppress weed growth, eliminating the need for herbicides and reducing the demand for manual labor.

15-30% **improvement in water application efficiency for irrigation**

Water Mains Pipework- Leakage Detection

The proposed system has been evaluated by faculty and installation of noise loggers has been completed. Further testing will be carried out in the coming year.

LANDSCAPE & BIODIVERISTY — OVERVIEW

HKUST is proud to host a diverse range of flora and fauna, contributing to the overall biodiversity on campus. Through a Roadside Tree Survey in 2024, 2357 trees, representing 127 different species, have been identified and assessed. These trees not only provide shade and aesthetic appeal but also support the local ecosystem. Additionally, the campus is home to approximately 75 species of birds and around 100 species of butterflies.

To preserve and enhance the biodiversity richness on campus, the University has published a policy to encourage the planting of native tree species for the new development, and the maximization of timber resources when tree felling is necessary.

Apart from policies, various volunteering activities were organized to engage the community in tree planting to promote awareness of biodiversity conservation.

Finally, the University has been improving the soil content of the campus landscape by eliminating the use of chemical fertilizer and promoting on-site compost production and use of organic fertilizer.

2357 trees

127 different tree species

75 different bird species

100 different butterfly species

LANDSCAPE & BIODIVERISTY — PERFORMANCE

2028 Sustainability Challenge - Landscape and Biodiversity Goals

Utilize the campus landscape as an active resource for research, sustainability experimentation, and community engagement.

Category	2023-24 Tactics	2023-24 Progress & Key Activities
Healthy Soil	Allocate spaces on campus for utilizing "green" landscape wastes and storage of site-developed compost.	• Eliminated the use of chemical fertilizer. • Utilized 815kg of shredded leaves from campus and 5400kg of upcycled wood chips from off-campus for mulching and soil conditioning. • Experimented the use of Black Soldier Fly fertilizer and compared with Compost Tea.
	Prioritize the use of compost in flower beds as a way to provide natural nutrients to a groundcover that can retain moisture	
	Experiment with "compost tea" as a way to add natural nutrients to the turf and grassy areas.	
Engagement and Research	Collect flora and fauna information from SSC projects to build a public and visible inventory of the natural capital of the campus.	• Completed roadside tree survey covering 2,357 trees. • "You Will See a Birdwing" Sustainable Smart Campus project have laid out the ground work for the butterfly garden.
	Add specific landscape areas and features in the campus tours for incoming students and visitors.	• Improved the visual of the campus by adding colourful plants to the indoor and outdoor environment. • Ecological enhancement of staff quarters landscaped slopes with native trees. • 95 saplings from Research Building 2 construction site were transplanted to Upper BBQ Site garden. • The community garden have hosted tours for 204 students from external schools.
	Engagement with contractor to ensure meeting all performance goals to reach incentive benchmark.	• Regular and active engagement of contractor through bi-monthly Biodiversity Steering Committee Meeting.

LANDSCAPE & BIODIVERISTY — OPERATION PROJECTS

Roadside Tree Carbon Storage

In 2024, HKUST surveyed 2,357 trees to assess the risk posed to pedestrians. During this assessment, biodiversity data were also collected.

Out of the 113 species surveyed, approximately 20% are native to Hong Kong. Native species hold significant ecological value and contribute to the city's biodiversity by providing habitat and food for campus fauna, especially pollinators. In addition, as native species are more adapted to the local climate, the maintenance costs are lower.

These trees, regardless of their native status, offer various ecosystem services, including air quality improvement, soil erosion prevention, stormwater absorption and filtration, and overall well-being for the campus community. Thus, they are essential natural resources for HKUST.

Utilizing data from the Roadside Tree Survey, the University has employed tools from the U.S. Forest Service Research and Development to estimate the carbon storage capacity of the campus trees. Currently, analysis indicates that the 2,357 trees on campus are collectively storing 577.2 tonnes of carbon.

2,357 trees surveyed

577 tons of CO_2 stored in trees

On-Site Organic Waste Upcycled into Soil Conditioner

As part of the HKUST Sustainability Challenge 2028, a focus was placed on healthy soil for the campus landscape. To advance this goal, the University has applied 5,400 kg of off-campus waste woodchips from Y-Park and 815 kg of on-campus waste shredded leaves, which provide organic matter that enhances the fertility and structure of the soil.

This practice not only improves soil content but also helps retain moisture, thereby reducing water consumption for irrigation. Additionally, it prevents soil erosion, suppresses weed growth, and regulates soil temperature. By providing habitat for beneficial microorganisms and insects, it promotes a healthy ecosystem.

5,400 kg of woodchips applied

815 kg of shredded leaves upcycled

LANDSCAPE & BIODIVERISTY — OPERATION PROJECTS

Chemical Fertilizer Total Elimination

To further enhance soil quality in the campus landscape, HKUST explored natural soil amendment agents following the elimination of chemical fertilizers last year.

This year, the University has experimented with compost tea, which utilizes horse manure as a raw material, and Black Soldier Fly (BSF) Fertilizer, derived from chicken manure, both sourced from organic waste materials. These amendments provide comprehensive nutrients to the soil, promoting the growth of beneficial microorganisms.

The results of the experiment indicate that BSF Fertilizer demonstrated the best performance. Consequently, BSF fertilizer has been integrated into campus operations, with 500 kg of fertilizer applied to the landscape, enriching the soil with natural and comprehensive nutrients.

2 chemical fertilizer alternatives tested

100% replacement of chemical fertilizer by organic alternatives

500 kg organic fertilizer applied

Research Building 2 Sapling Transplanting

In a display of environmental stewardship, the University has taken a proactive measure to conserve the ecological value of the woodland which is to be cleared for the Research Building 2 project.

Going beyond the requirements of regulations, HKUST identified 128 saplings of 17 different native species and put together an effort to rescue them.

The effort marked a significant milestone in promoting sustainability and conservation efforts within the university community, for it not only engaged the professional landscapers but also around 70 voluntary HKUST community members, demonstrating the community's dedication to biodiversity conservation.

The 128 saplings were eventually transplanted to different locations on the campus, enhancing the biodiversity of the ecosystems on campus.

128 saplings identified and transplanted from a construction site

70 HKUST volunteers recruited for transplantation

LANDSCAPE & BIODIVERISTY — OPERATION PROJECTS

Alumni Sapling Planting Volunteering

With the intention of sowing the seeds of biodiversity conservation and in a display of reunion, the University organized a tree planting event along with HKUST Alumni.

The 20 Alumni planted 25 saplings of five different native species in the Upper BBQ Site garden. One of the species, Cyclobalanopsis hui, had only 20 known mature individuals in only one location in Hong Kong back in 2018; another species, Endospermum chinense, with fewer than 1,000 individuals back in 2021 thought to be persistent in Hong Kong and carried historical significance related to indigenous knowledge, was also planted in the garden.

20 alumni members participated

25 saplings of native species planted

Ecological Enhancement Programme in Staff Quarters Landscaped Slopes

In resemblance to the woodlands of Hong Kong, certain areas of the University's greenery are dominated by exotic species that serve as pioneer trees, capable of thriving in poor soil and effectively preventing soil erosion. However, as these trees age, they pose risks to the campus community and hinder the growth of native species.

To enhance the ecological value of the campus woodlands and address the increasing risk of fallen trees, the University has launched the Woodland Thinning and Ecological Enhancement Programme.

As part of this initiative, trees comprising both exotic species and native species in substandard health—were removed from the Senior Staff Quarters (SSQ) slope, and 252 tree seedlings of native species were planted to enrich the area.

During the tree-felling process, several trees with high-quality wood were carefully harvested and processed into planks for upcycling into furniture, art installations, or souvenirs, demonstrating the University's commitment to preserving natural resources.

252 seedlings of native species planted

10 m^3 of waste wood recycled

LANDSCAPE & BIODIVERISTY — OPERATION PROJECTS

Community Garden – Organic Gardening Education

The HKUST Community Garden embraces the principles of organic farming, fostering growth, community engagement, and sustainable land management for agriculture and tourism.

As a Community Garden within a tertiary education institution, the Garden strives to extend its influence and provide educational value to the University and beyond regarding the importance of organic farming.

In 2023-24, the Garden welcomed over 128 visitors from Busy Bee Kindergarten at HKUST and 60 students from two local primary schools. In the visits, the students are introduced to the importance and the actual practices of organic farming, inspiring the next generation to protect nature.

The Garden also conducted workshops on vermicomposting for 16 students from Clear Water Bay School, an ESF school adjacent to HKUST. The workshop empowered the students to produce their own organic compost and recycle organic waste.

In addition to in-person activities, the Garden engaged 3,607 social media platform users, promoting organic farming practices and biodiversity conservation initiatives.

204 students from external kindergardens and primary schools engaged through tours and workshops

3,607 social media platform users engaged

WASTE — PERFORMANCE

47.3% decrease in landfill waste compared to 2014 baseline and 4.2% below 2022/23

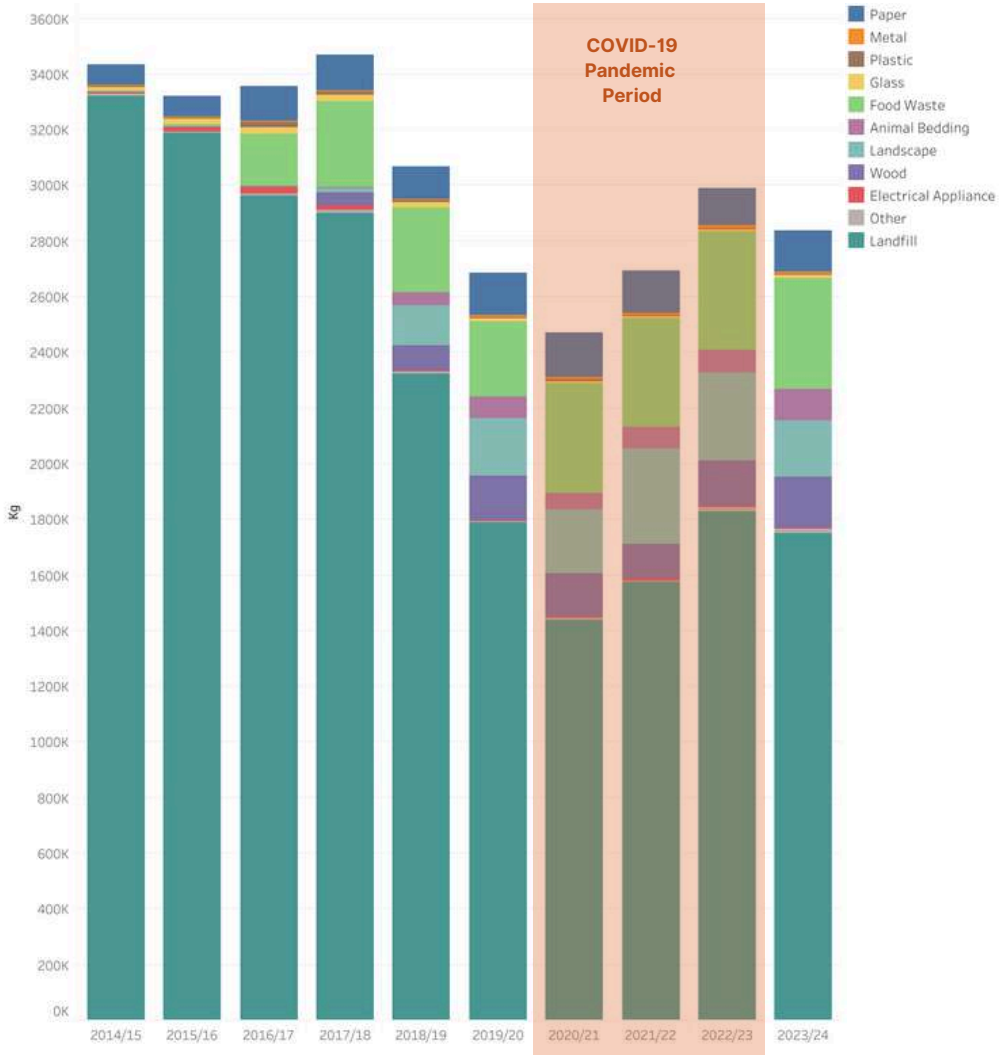
Recyclables increased by 8.6 times compared 2014 baseline and decreased by 6.5% from 2022/23

Waste Generation Overview

The 2023/24 year saw some improvement in HKUST's landfill waste, as it decreased by 4.2% compared to the previous year, despite the almost complete resumption to face-to-face activities. Landfill waste generation for this year is also 47.3% less than the baseline year. The total recycling figure slightly decreased by 6.5% compared to the previous year, but it is still 8.6 times higher than the baseline year. Since the start of the pandemic in the 2020/21 year, the University has continued to display its commitment to recycling, and this is observed through the recycling of at least 1,031.5 tons or more since that year.

The University has been recycling 15 types of recyclables, including, but not limited to, paper, metal, plastic, glass, food, animal bedding, landscape, wood, and electrical appliances. HKUST will continue to pursue meeting the HKUST 2028 Sustainability Target of diverting 75% of waste away from the landfill.

Waste and Recycling Generation at HKUST Over the Years



WASTE — PERFORMANCE

Paper Consumption

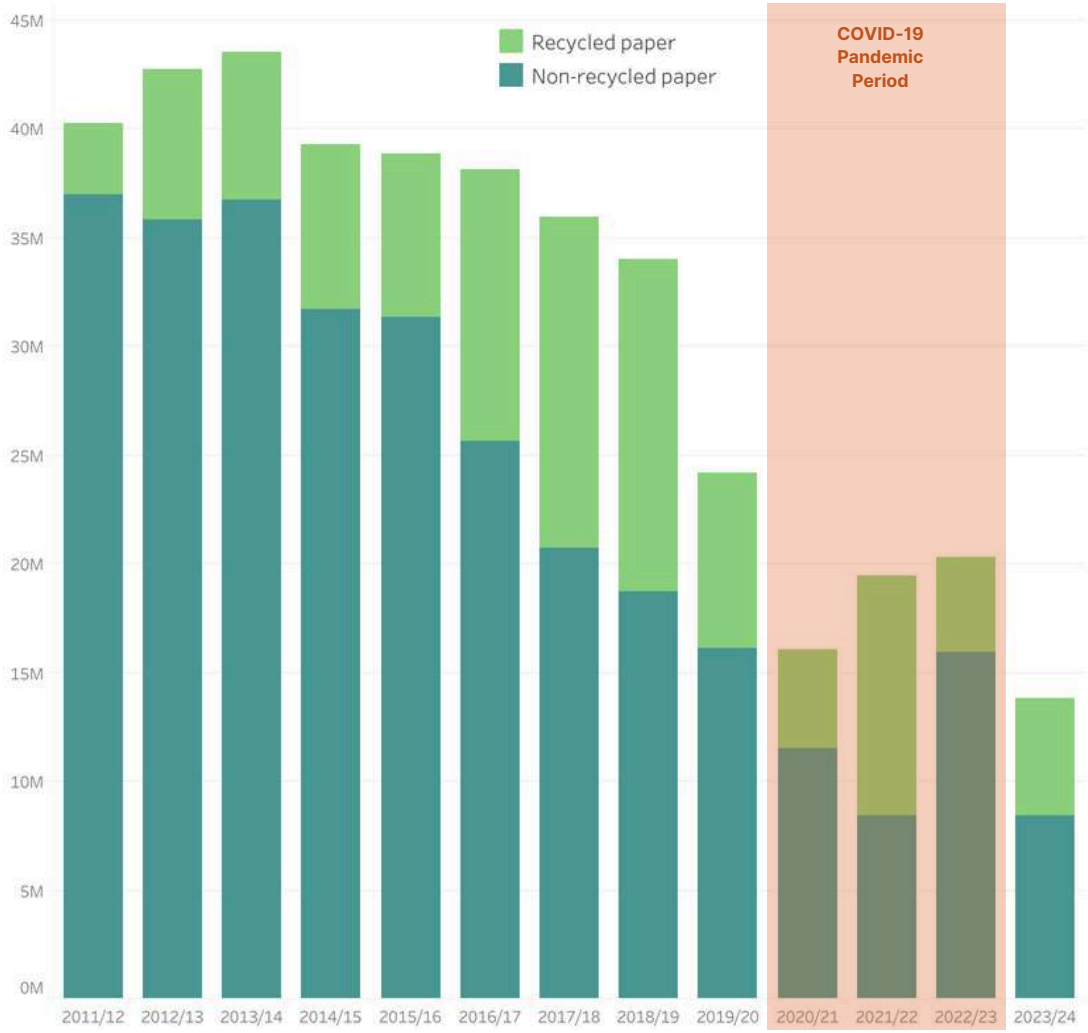
The 2023/24 year marked HKUST's all-time low in total paper consumption.

There was a 32.1% decrease compared to the previous year's total paper consumption and a 64.9% decrease compared to the 2014 baseline. The non-recycled paper consumption figure this year is similar to that of 2021/22, but the former is slightly less than the latter. The recycled paper figure is 22.4% larger than the previous year.

The improvements in decreasing HKUST's paper consumption may be attributed to 50% of the administrative offices adopting paper reduction practices during the pandemic, and sustaining 79% of these practices even after the pandemic concluded. There has also been a continuous effort to improve digital channels and websites, which could further reduce paper consumption in the future.

Looking ahead, the nine administrative offices under the Vice President of Administration and Business (VPAB) have committed to reducing their overall paper consumption by 25% in comparison to the 2022/23 period. With the development and promotion of new e-platforms, as well as initiatives aimed at cultivating paperless operational habits among staff members. These measures demonstrate the University's ongoing dedication to minimizing environmental impacts and advancing sustainable practices in paper usage.

Paper Consumption Trend at HKUST Over the Years



WASTE — PERFORMANCE

2028 Sustainability Challenge - Waste Goals

Using the baseline year of 2014, reduce waste to the landfill by 75% by 2028.

Category	2023-24 Tactics	2023-24 Progress & Key Activities
Disposables	Eliminate one-time-use plastics and non-biodegradable disposables that cannot be recycled. Reducing the need for these materials is the priority. Developing reusable container programs, lunchbox borrowing schemes, and financial disincentives are options.	• Banned certain single-use plastic items for 19 service providers on campus. • Piloted a Zero Plastic Takeaway Container Pilot Program and ordered over 130,000 zero-plastic takeaway containers in collaboration with five catering outlets on campus. • Launched the Lunchbox Lending Programme to allow HKUST members to borrow reusable lunchboxes, 8,939 single-use lunchboxes were avoided by this programme. • Organized the "Flip the Change" campaign to encourage HKUST members to participate in the "Bring Your Own Cup" commitment. • Collaborated with an one-stop green lifestyle reward platform to encourage green actions. 9,746 items are recycled and recorded on the platform
Extending Life of Materials	Develop more "sharing economy" opportunities.	• Organized two Garage Sale and drew 200 HKUST members to participate, promoting the sale of reuse of second-hand items. • Participated in the JCSCCP Sustainability Leadership Programme and 600kg of clothes were redistributed with the external and the campus community.
	Emphasize repairing and reuse, and support activities like "Repair Parties" where equipment can be brought back to life.	• Collaborated with a company specializing in sustainable asset management to promote the reuse and redistribution of material assets in Hong Kong, including office furniture. • Transformed the wood collected from a campus development project into 800 souvenirs and offered to speakers, guests, and partners of HKUST. • Introduced the Municipal Solid Waste (MSW) Charging Scheme to achieve waste disposal reduction through behavioral changes with 954 campus units participating.

WASTE — OPERATION PROJECTS

Municipal Solid Waste Charging Scheme

Despite the Hong Kong Government's announcement to defer the implementation of the Municipal Solid Waste (MSW) Charging scheme, which aims to achieve waste disposal reduction through behavioral changes, HKUST proceeded with the scheme to share waste management costs based on the "Polluter Pays" principle.

Starting from April 1, 2024, the scheme was introduced across 107 offices, 800 laboratories spanning 34 departments, and 13 student halls. Additional fees will apply for extra requests for plastic bags and bulk disposal of landfill waste. To prevent unauthorized dumping, most indoor and outdoor trash bins have been removed.

954 units participated in the MSW charging scheme

Single Use Plastic Removal

On April 22, 2024, Hong Kong implemented the first phase of the Regulation on Disposable Plastic Products. This proactive measure aims to mitigate the detrimental impact of single-use plastics on the environment and encourages individuals and businesses to adopt more sustainable alternatives.

To comply with this regulation, the University has banned single-use plastic items, including utensils, plates, and straws for both dine-in and takeaway meals from 19 catering outlets. At this stage, only dine-in meals will be banned from using single-use plastic containers, cups, and their lids.

Additionally, toiletries in the Conference Lodge, such as toothbrushes, sanitary bags, vanity kits, sewing kits, and combs, now utilize bamboo-based and paper-based materials.

19 service providers on campus banned from using single-use plastic for certain items

WASTE — OPERATION PROJECTS

Zero Plastic Takeaway Container Pilot Program

With over 15,000 takeaway containers consumed weekly on campus, many of these are made with plastic lining or biodegradable plastic, which are difficult to decompose. To promote a 'plastic-free' approach at the source, plant fiber-made takeaway food containers have been introduced in participating restaurants as part of the pilot Program.

Users are encouraged to return emptied zero-plastic takeaway containers to designated collection bins for recycling. These containers are made from 100% biodegradable materials, containing no plastic, and will decompose completely within 75 days.

Following the success of Phase I of the Pilot Program, which saved over 20,000 plastic disposables, the University collaborated with five new catering outlets in Fall 2023 to further reduce waste sent to landfills. Over 130,000 zero-plastic takeaway containers were ordered, marking a successful preparation for the plastic ban by the Hong Kong Government.

130,000 **zero-plastic takeaway containers ordered**

Second Hand Furniture Reuse & Donation

As renovations progress in hallways and offices, the University's demand for furniture has increased. In response, HKUST has collaborated with a company specializing in sustainable asset management to promote the responsible reuse and redistribution of material assets in Hong Kong.

The University will both donate and receive second-hand office furniture from this collaborator, participating in efforts to promote a circular economy.

WASTE — OPERATION PROJECTS

Garage Sale

In the fall of 2023 and spring of 2024, the long-standing annual Garage Sale and Market returned to the HKUST campus.

These events attracted over 200 community members selling second-hand items, including clothing, toys, children's books, handicrafts, and appliances. Several charities and vendors promoting upcycled and green products were also invited to participate.

With the theme of "Zero Waste," the events encouraged the sale and reuse of second-hand items to prevent them from ending up in landfills. All participants were asked to use their own reusable food containers to enjoy the food provided.

200 HKUST community members, charities and green vendors participated

Paper Reduction Working Group

Given the increasing trend of paper consumption and decreasing recycled paper usage, the University has formulated the Office Paper Reduction Strategy to address the paper consumption by administration offices which account for around 20% of the consumption.

The strategy aims to encourage offices to embrace digitalization, simplify and streamline operations to reduce paper consumption in 2023-24.

Furthermore, HKUST established the paper working group to work with different departments to develop concrete plans for paper reduction. Aside from formulating plans, they also ensured that paper consumption was closely monitored for each department.

After identifying and engaging the top paper consumers among the administration offices, the campus's overall paper consumption has decreased by 34%, marking the strategy's success has decreased by 34%, marking the success of the strategy.

34% decrease in overall paper consumption

WASTE — OPERATION PROJECTS

Waste Audit

In the spring of 2024, the University conducted a waste audit with 15 participants comprising of staff and students, collecting waste from general offices, laboratories, toilets, caterers, and general waste bins on campus. 388.6 kg of waste was collected and sorted.

The results indicated that, aside from waste that cannot be recycled or composted, food waste, paper towels, and disposables are the top three contributors to general waste sent to landfills. Based on these findings, the University will target these waste types to reduce their volume.

389 kg waste audited

15 participants comprised of staff and students

Wood Reuse

The beloved mature Acacia tree grove across from Shaw Auditorium was repurposed for the construction of the new Martin Ka Shing Lee Innovation Building in late 2022. By early 2024, campus users can begin to appreciate the beauty and heritage of these trees in their new forms throughout the campus, including in the newly renovated Student Center's interior furnishings, office furniture, acknowledgment plaques, and other installations.

In addition to wood recycled from felled mature Acacia confusa trees at the Senior Staff Quarters, the University's wood resources have expanded. These materials have been transformed into 800 customized souvenirs offered to speakers, guests, and partners as tokens of appreciation for their invaluable contributions. These souvenirs have been featured in events like "A Conversation with Founding HKUST President – Prof. Chia-Wei Woo," "Kick-Off Ceremony of Global Service Day," and "HKUST x France: Green Finance – The Way Forward," and will also be showcased in the upcoming "Unicorn Day" and "Sustainable Design Thinking Certificate Programme." This initiative strengthens connections to HKUST and celebrates over 30 years of heritage. In a recent event, the University's founding president expressed his delight in receiving this meaningful souvenir.

WASTE — OPERATION PROJECTS

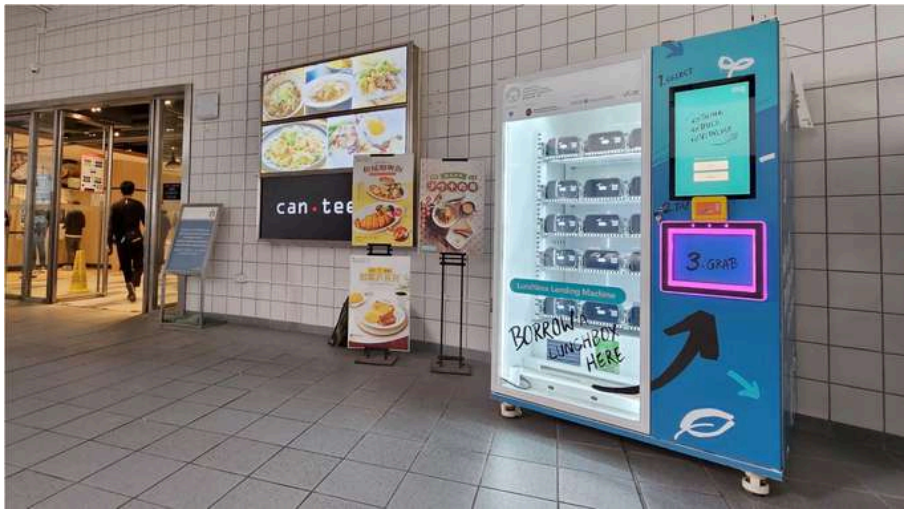
Jockey Club Sustainable Campus Consumer Program (JCSCCP) Initiatives

Lunchbox Lending Programme (LLP)

In collaboration with the Jockey Club Sustainable Campus Consumer Programme (JCSCCP), HKUST joined eight UGC-funded universities to install the first system of its kind among universities in the Asia-Pacific region in 2023. This initiative involved the installation of a vending machine to lend up to 120 reusable lunch boxes, along with a corresponding reverse vending machine equipped with internal cameras and AI object recognition software to facilitate the collection process. This initiative provides a green alternative for disposing of takeaway containers, helping to eliminate lunch boxes from landfills.

As of June 2024, 8,939 lunchboxes have been borrowed from the machines at HKUST, contributing to the reduction of disposables on campus.

8,939 **single-use lunchboxes avoided**



WASTE — OPERATION PROJECTS

Jockey Club Sustainable Campus Consumer Program (JCSCCP) Initiatives

Sustainability Leadership Programme

In Spring 2024, 11 HKUST students participated in the JCSCCP's Sustainability Leadership Programme, joining a cohort from seven other universities for leadership training focused on issues of overproduction and overconsumption in the clothing industry, both locally and globally. After learning from local circular fashion experts, the student teams were tasked with developing and delivering projects that promote clothing circularity within their respective campus communities—specifically, finding ways to collect, sort, and redistribute clothing while encouraging circularity and responsible consumption.

The 11 students formed two project teams, each proposing different strategies to foster a circular fashion mindset within the HKUST community. Together, they successfully prevented over 600 kg of unwanted clothing from entering landfills—500 kg were passed to NGOs for redistribution and 100 kg were redistributed within the campus community. One team organized an awareness-raising campaign, while the other created a free clothing reselling platform for the HKUST community.

11 **HKUST students participated**

600 **kg of clothes diverted from going to landfill**

Green Lifestyle Reward Platform Collaboration

JCSCCP and a Hong Kong's one-stop green lifestyle reward platform have jointly launched the "Go Green & Earn Rewards" campaign.

Through this collaboration, HKUST members can earn green rewards by borrowing and using reusable lunch boxes from the JC LLP lending machines, recycling, enjoying vegetarian meals, walking, using the MTR, and participating in other green actions. This initiative encourages the HKUST community to contribute to the Sustainable Development Goals (SDGs), specifically SDG 12: Responsible Consumption and Production.

In 2023-24, the platform recorded 9,746 items recycled by the HKUST community, promoting a circular economy.

9,746 **items recycled and recorded on the platform**

WASTE — OPERATION PROJECTS

Jockey Club Sustainable Campus Consumer Program (JCSCCP) Initiatives

Flip the Change

To encourage responsible consumption habits and celebrate Earth Day, HKUST organized the 'Flip the Change' campaign in Spring 2024, inviting a company to pilot a reusable cup lending program on campus for one week. During the campaign, the University collected hundreds of used single-use cups disposed of over the week, displaying them in a recycled wood container as an installation to showcase the waste generated by consumption behavior.

The campaign engaged around 500 community members, encouraging them to pledge to "BYOC"—bring their own cups.

500 **HKUST members pledged to bring their own cups in the future**

SOCIAL

Creating and nourishing an inclusive and open environment is a vital component to HKUST's commitment to diversity. By promoting diversity and equal opportunities, expanding community engagement initiatives, as well as offering inclusive facilities and services, University members are encouraged to embrace and value differences, to learn from each other, and cultivate a mindset that supports inclusiveness, collegiality, and respect.

The University also foster a caring and creative learning community which not only helps to develop student's knowledge and skills in their selected discipline, but also inspires them to broaden knowledge and develop full potential in pursuit of their goals.

SOCIAL — PERFORMANCE

2028 Sustainability Challenge - Community Well-Being Goals

Establish a framework for measuring progress for the well-being of the campus community in relation to food, lifestyles, and workplace environments.

Category	2023-24 Tactics	2023-24 Progress & Key Activities
Healthy and Productive Workplaces	Develop a set of indicators that can be used to benchmark happiness and well-being for faculty and staff.	• Improvement in Net Promoter Score by 86% for non-academic staff and 21% decrease for academic staff compared to 2022/23. A survey was sent as part of annual materiality survey.
	Adopt flexible modes of working by devising policies to cater to the different needs of our staff; including evaluation of software or technologies necessary to support flexible work arrangements and evaluation of schedules and adapted work.	• Development of working from home arrangement.
	Provide career development training and mentoring.	• Concluded the Redbird Mentoring Program with positive feedback from the mentee and mentor.

MEASUREMENT MATRIX

Net Promoter Score (NPS)

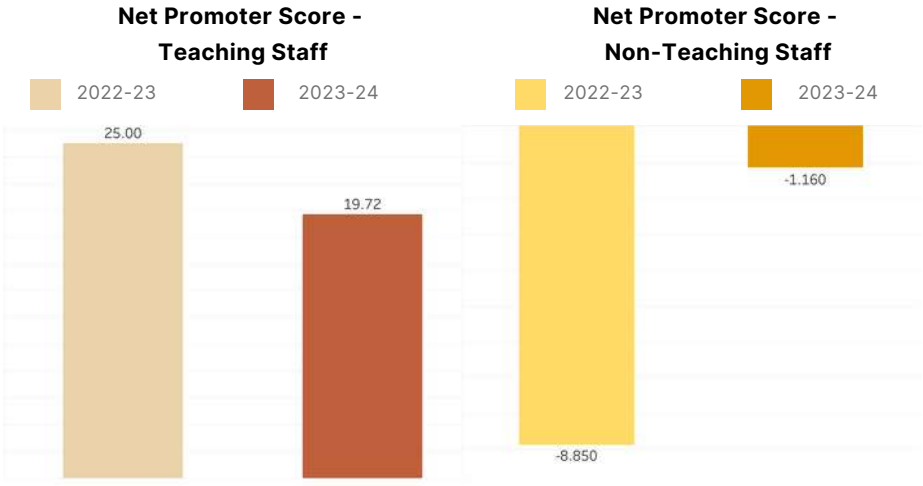
Assessing Staff Satisfaction

The Net Promoter Score (NPS) is a metric used to evaluate employees' job satisfaction by gauging their willingness to recommend their company to others. Employees who rate the University with scores of 9-10 are considered promoters, as they are likely to spread positive word-of-mouth. Those rating the University with scores of 7-8 are classified as passives, while those rating it with scores of 0-6 are labeled detractors, indicating a high level of dissatisfaction.

In this year's NPS assessment among the teaching staff, there has been an approximately 5-point decrease compared to last year. This suggests that there is a need for improvement in the teaching staff's well-being.

On the other hand, regarding the non-academic staff, there has been an approximately 8-point increase compared to last year. This suggests that the well-being initiatives for staff have been successful.

These findings emphasize the importance of taking appropriate measures to enhance job satisfaction and engagement among employees, particularly among the academic staff, to improve the overall NPS and create a more positive work environment.



FAIR WORKING & STUDY ENVIRONMENT

Inclusive, Fairness & Diversity

Inclusive Facilities and Guideline

As part of the University's commitment to fostering a positive learning, living, and working environment for its staff and students, HKUST offers a range of inclusive facilities, support, and services tailored to meet diverse needs and promote equal opportunities.

The University is dedicated to ensuring that its facilities and services are accessible to all members of the community, including individuals with disabilities. By incorporating inclusive design and supportive features, such as the on-campus Welcab service for students with mobility disabilities, the University aims to eliminate barriers and provide an equitable experience for everyone at HKUST.

Catering options are also designed to accommodate various tastes and dietary needs within the University community, including Halal and vegetarian options.

In addition to accessibility and catering, family-friendly and female-friendly facilities and services are available to support families in the HKUST community. This includes two Mothers' Stations and a newly installed vending machine that provides accessible female sanitary products for community members.

To foster an appreciation of diversity and unite the HKUST community, the University has produced the Inclusive Language Guidelines Booklet and the Inclusive Language Guidelines Leaflet (for students). These resources aim to raise awareness and assist faculty, staff, and students in incorporating inclusive language into their everyday communication at HKUST.

FAIR WORKING & STUDY ENVIRONMENT

Inclusive, Fairness & Diversity

SENtastic Staff Week

To promote a positive and inclusive environment while actively involving staff in supporting students with special educational needs (SEN), the SENtastic Staff Week was successfully held in April 2024. The event featured a thought-provoking drama performance, discussions on diversity and inclusion, and workshops on neurodiversity, attracting over 150 staff members who actively engaged in the activities. Moving forward, the University is committed to further involving and educating staff on how to support students with SEN collaboratively, cultivating a more inclusive campus environment that meets the diverse needs of all students.

150 staff members actively engaged in SEN event activities

Funding Scheme for Student Activities on SEN

The University is committed to creating and promoting a positive learning environment that provides equal opportunities for all students. As part of the HKUST community, students, staff, and faculty members are encouraged to cultivate campus inclusion and enhance disability awareness and accessibility.

The Funding Scheme for Student Activities on Special Educational Needs supports student initiatives to organize events and activities that educate the HKUST community on the needs and concerns of students with SEN. This scheme aims to increase student leaders' knowledge on SEN, discourage discrimination, celebrate diversity, and foster the integration of students with SEN into daily campus life.

Barrier-free Discovery Tour to Singapore 2024

To foster the development of students with SEN and raise awareness among faculty and staff about inclusive practices, SEN Support organized a Barrier-Free Discovery Tour to Singapore from 4 to 9 June 2024. The tour aimed to empower participants through firsthand experiences of inclusiveness and accessibility, with visits to universities and organizations showcasing best practices. 15 students and 16 staff members actively engaged in the tour, leading to increased awareness and proactive involvement. Several offices are now planning and implementing the insights gained from the tour on campus, contributing to a culture of inclusivity within the university community.

31 students and staff members engaged

FAIR WORKING & STUDY ENVIRONMENT

Inclusive, Fairness & Diversity

Diversity, Inclusion, and Equity (DEI) Awareness Workshops

University-wide publicity campaigns were held to promote understanding and appreciation of diversity. These included celebrations of significant international diversity-related dates, such as International Women's Day, International Day for the Elimination of Racial Discrimination, and Global Diversity Awareness Month.

The topic "Diversity and Equal Opportunities @ HKUST" was introduced in both staff and new student orientations to familiarize members with HKUST culture, policies, and available support. Workshops on a wide array of topics related to diversity, inclusion, and equity (DEI), such as sign language, neurodiversity, and unconscious bias, attracted over 1,500 participants. Regular exhibitions and talks on anti-discrimination and sexual harassment were organized to raise awareness among participants. The University also continued to offer the Online Training Module on Preventing Sexual Harassment to all HKUST students.

1,500 participants engaged in workshops

List of Workshops / Events Organized in 2023-24:

- Dark and Silence Experience (14 July 2023)
- Summer Cultural Experience with Your Kids - Sikh Temple Visit (21 July 2023)
- Family Cultural Experience: African Drum (21 October 2023)
- Standing Up for Diversity: Celebrating Global Diversity Awareness Month at HKUST (24 October 2023)
- Sign Language: Understanding Diverse Needs in Workplace and Classroom (27 October 2023)
- DEO Resource Persons Training (15 to 25 January 2024)
- Chocolate Dragon's Beard Candy Making Workshop (26 February 2024)
- Celebrating International Women's Day 2024 at HKUST (6 to 19 March 2024)
- Be My Buddy Buddy Exhibition (6 to 18 March 2024)
- Cultural Bazaar 2024 (22 March 2024)
- Exhibition on Anti-discrimination and Sexual Harassment (8 to 19 April 2024)
- Navigating Neurodiversity: Strategies for Supporting Students (19 April 2024)
- Online Talk: Introduction to the Anti-discrimination Laws of Hong Kong (25 April 2024)
- Colors of Inclusion: Art Workshop for All (21 June 2024)

FAIR WORKING & STUDY ENVIRONMENT

Staff Support

Staff Well-being

In the 2023-24 academic year, the University hosted a variety of initiatives focused on employee engagement, diversity and inclusion, talent development, and well-being. Key highlights included:

- Diversity and Inclusion: Experiences such as the Dark and Silence Experience and Sikh Temple Visit aimed to enhance understanding and appreciation of different cultures. Workshops on anti-discrimination and inclusive language were also conducted.
- Employee Well-being: Various wellness workshops, including self-massage and creative activities like painting, balloon creations, and flower bookmark, promoted mental and emotional health.
- Talent Development: A series of mini-series and workshops focused on leadership, effective communication, and feedback skills helped employees enhance their professional capabilities.
- Compliance and Awareness: Sessions on sexual harassment prevention, anti-bribery, and recruitment biases ensured staff were informed and compliant with important regulations.

Overall, these initiatives fostered a supportive and inclusive work environment while promoting personal and professional growth among employees.

FAIR WORKING & STUDY ENVIRONMENT

Staff Support

HKUST Staff Association

The HKUST Staff Association was established to promote social, cultural, and recreational activities among staff members while protecting their welfare. It also serves as a communication link between the University and its staff members and provides financial assistance to eligible members in times of need.

Staff Volunteering Program

Since the launch of the staff volunteering policy in 2022, around 100 full-time staff have taken special leave to participate in volunteering services in Hong Kong and in Wellness/Diversity & Equal Opportunities initiatives organized by the University. Colleagues from different departments have embraced these opportunities to contribute to the community.

Redbird Staff Mentoring Program

The Redbird Staff Mentoring Program was concluded with positive feedback from the mentee; over 77% of them agreed that it met the set objectives, and will recommend it to their colleagues.

FAIR WORKING & STUDY ENVIRONMENT

Development Assistance

University-wide Scholarship

HKUST offers a wide range of scholarships to attract and recruit high-caliber students with outstanding academic backgrounds from Hong Kong and around the world to pursue their undergraduate education at the University. Most scholarships are nominated by Schools, Departments and/or the University Scholarship Committee. A small number of scholarships are awarded on a competitive basis.

In addition, HKUST offers scholarships to honour its outstanding postgraduate and continuing undergraduate students in various programs of study. With the generous support from the donors, scholarship opportunities are ever-increasing at HKUST in recent years. While most scholarships are awarded on the strength of academic merit, HKUST also recognizes students with non-academic achievements or special talents.

WeCan Scholarship

WeCan Scholarship Scheme helps students pursue first-degree courses in the eight UGC-funded universities and the Hong Kong Academy. After receiving the WeCan Scholarship, the alumni family is invited to participate in volunteering activities under WeCan and community services to give back to WeCan a nd society.

Local Start-up Assistance

HKUST supports local entrepreneurs through financial assistance and non-financial support to local startups. Notable funding schemes such as the HKUST Entrepreneurship Fund (E-Fund), HKUST Entrepreneurship Development Fund (EDF), and the Technology Start-up Support Scheme for Universities offer support for research and development, business, and market development activities. The University prioritizes startups with innovative technologies and business models, aiming to bring about social and economic impact, fostering knowledge transfer and promoting entrepreneurship within the local community.

HKUST-Sino One Million Dollar Entrepreneurship Competition

In 2019, the University set up a HK$50 million fund to support start-ups in addition to working closely with industry partners to organize competitions nurturing start-ups with innovative technologies, as well as high potential to bring about social and economic impact. The HKUST-Sino One Million Dollar Entrepreneurship Competition 2024 is a platform for HKUST and surrounding community members to create new businesses and to prepare students to start their future careers in entrepreneurship.

FAIR WORKING & STUDY ENVIRONMENT

Development Assistance

Employment Support

HKUST is dedicated to helping students explore, plan and prepare for future careers. Resources, services, programs and assistance are provided for the exploration of interests, planning for further studies, understanding the trends and prospects of favorite industries, developing career competencies, obtaining up-to-date job information for internships, part-time or graduate employment, preparation for competitive job search process or advice on a career decision

In 2024, the Career Center of HKUST has organized a career mosaic with over 220 companies or organizations, bringing promising graduate job and internship opportunities over a wide range of industries.

HKUST Alumni also launched the HKUST United Program to support students by offering career advice, start-up support, and job or internship opportunities.

220 companies attended the career mosaic 2024

University Financial Assistance

HKUST offers financial aid programs for both undergraduate and postgraduate students. The University Financial Assistance (UFA) is available to local students facing financial hardship, with assistance levels determined by their family's financial circumstances, including special provisions for Emergency Financial Assistance. The University also supports students with programs such as Deferment of Tuition/Hall fees and a Loan Scheme for Off-campus Housing.

Personal Finance Ambassador Programme

The Personal Finance Ambassador Program 2024 is sponsored by HKEX Foundation through a donation to The Community Chest and co-organised by the Investor and Financial Education Council and St. James' Settlement. The programme offers an enriching experience to participants through extensive professional training in different areas, execution of a meaningful project that creates a positive impact on their peers, and engagement with the public or secondary school students to educate the audience about personal finance management.

International Enrichment Grant

Through the International Enrichment Grant, regardless of the CGA figure, HKUST School of Business and Management provides financial support for undergraduates' participation in overseas, including Mainland China, competitions, conferences, community projects, business-related enrichment programs, exchange-out and Internship programs. It aims at widening undergraduates' international perspective, sharpening their analytical skills, and helping them put theories into practice.

HEALTH & SAFETY

Physical Health & Safety

Hazardous Materials and Waste Disposal

The University plays a vital role in ensuring the health and safety of the campus community. It has implemented various initiatives to effectively manage hazardous materials and waste disposal. The HKUST Disposal of Hazardous Materials and Items under the Regulatory Control Guideline provides guidelines for waste segregation, proper forms, and safe storage. The University offers guidance, evaluates compliance, and arranges for waste disposal. The University also adheres to the HKUST Liquid Effluent Management Guideline to ensure compliance with environmental standards for sewage and coastal water discharge. Regular sampling is conducted to monitor parameters such as pH, oxygen demand, and toxic metals. HKUST exercises the proper disposal of hazardous waste and prohibits dilution.

Occupational Health and Medical Surveillance Program

The University provides an occupational health and medical surveillance program that meets regulatory requirements and professional standards to ensure a safe work environment for employees.

The pre-placement examination evaluates overall fitness and physical ability to perform the required tasks, consisting of an inspection of medical history, occupational history, and physical examination.

Before performing work assignments, a more detailed medical assessment and stricter occupational medical surveillance are conducted with the assistance of the University as well.

HEALTH & SAFETY

Physical Health & Safety

Athletic Opportunities

The Sports Association serves as the official student entity promoting a healthy lifestyle and encouraging participation in sports activities. The association oversees over 30 sports clubs that provide a range of sports activities. From these clubs, the University Sports Teams are formed, with more than 50 HKUST teams participating in intercollegiate, local, and international competitions. These organizations and facilities offer various opportunities for community members to engage in sports and promote physical fitness.

50 **HKUST sports teams participating in intercollegiate, local, and international competitions**

Sport Facilities

The University offers a variety of sports and recreation facilities for students, staff, alumni, and their families. Facilities include a large indoor sports hall of 1,600 m² for badminton, basketball, volleyball, and handball; an outdoor sports center featuring an artificial turf soccer pitch, a 400 m track with eight lanes, a hard-surface mini-soccer pitch, basketball courts, a lawn area, and a tennis court. HKUST also boasts a 50 m outdoor pool and a 25 m indoor pool for aquatic activities, along with a Water Sports Center providing equipment for dragon boating, coastal rowing, windsurfing, kayaking, and sailing. Two fitness centers equipped with cardio and weight-training equipment are also available.

HEALTH & SAFETY

Physical Health & Safety

Experience Sports Workshops

The University organized two days of experience sports workshops, providing freshmen with opportunities to try different sports, including kendo, archery, tennis, softball, handball, rowing, korfball, netball, dodgeball, tchoukball, and karate.

Encouraging Participation and Inclusivity

The 2023 HKUST Sports Teams Flag Presentation Ceremony marked an energetic kickoff to the intervarsity sports season, uniting over 200 athletes across 59 teams. This event honored the achievements of student-athletes and emphasized the importance of teamwork and sportsmanship within the University community.

HKUST promotes inclusivity through initiatives like the HKUST Intramural Athletics Meet, encouraging all students to showcase their athletic skills and engage with peers in a fun and competitive environment. This initiative fosters a culture of health and well-being, allowing students to create lasting memories while participating in physical activities.

The recent HKUST Athletics Meet demonstrated the hard work and dedication of student-athletes, with over 300 entries showcasing their commitment to excellence in sports, further highlighting the University's focus on promoting physical health.

59 teams participated

200 athletes included

HEALTH & SAFETY

Nutrition

Food Outlets

At HKUST, several food outlets display the calorie information on the purchase display boards.

In addition, vegan and vegetarian options are served in food outlets near all academic buildings at HKUST.

Operational Emissions Do Not Harm People or Environment

The University complies with Hong Kong's Air Pollution Control Ordinance Law to evaluate air emissions and define the level of danger.

Emission levels determined to be harmful will be addressed to further prevent potential detrimental effects to the related stakeholders.

Drinking Water

Free and clean drinking water is also provided to the community.

HKUST has eliminated the use of one-litre one-time-use plastic water bottles by providing safe water supplies through constant monitoring.

HEALTH & SAFETY

Mental Health

Peer Support Community

Each year, numerous enthusiastic undergraduate and postgraduate students volunteers join two distinctive programs: the Peer Companion Training Program and the SENtastic Leader Program. The volunteer team has expanded to over 220 students. Participants receive relevant training and service opportunities that empower them to form core teams, develop collaborative ideas, and create a caring and inclusive environment within the community. They work closely with various departments, student organizations, and external units to provide chat services, share personal experiences, and organize outreach activities promoting campus wellness and diversity. This year, the first-ever online training has been introduced, allowing new student leaders to learn and review essential knowledge through a digital platform at their convenience. An online peer support community has also been established to strengthen connections among students and foster mutual support, with approximately 1,650 beneficiaries.

220 students trained in peer support for mental health and SEN

Student Wellness Working Group

The Student Wellness Working Group was established to develop a university-wide inventory of student-related surveys and well-being measures for benchmarking and assessing progress. It aims to develop demonstrations and recommendations for space design and underutilized areas that promote student wellness. Improvement works are being planned for the hallways and ground floor courtyards in the Main Academic Building to make them more conducive for students to take a break and socialize.

Psychoeducation Workshops

Psychoeducation plays a crucial role in fostering a community that values empathy and support, particularly during challenging times. A total of 133 psychoeducation workshops and wellness activities, including Mental Health First Aid courses, were conducted, benefiting over 12,000 students and staff members. Opportunities were provided for faculty and staff to enhance their understanding of mental health and support students effectively. This included learning platforms such as one-hour suicide prevention gatekeeper training and a 20-hour professional certification in college student well-being, trauma, and resilience. Investments were made in ongoing training and development to ensure stakeholders are equipped with the latest knowledge and skills.

133 psychoeducation workshops and wellness activities, including Mental Health First Aid courses

HEALTH & SAFETY

Mental Health

Exhibitions

The exhibitions "House of Failure" and "Getting in Touch with the Elephant in the Room" aimed to embrace mistakes, facilitate the exchange of insights and coping strategies, and promote family harmony. Over 5,000 students and staff visited the exhibitions, with many participants co-creating artworks that resonated with their personal stories. This high level of engagement suggests that the exhibitions successfully created a space for open dialogue and connection, promoting mental health awareness and well-being within the HKUST community.

5000 students and staff visited and co-created artworks for the exhibitions

Technology-driven projects

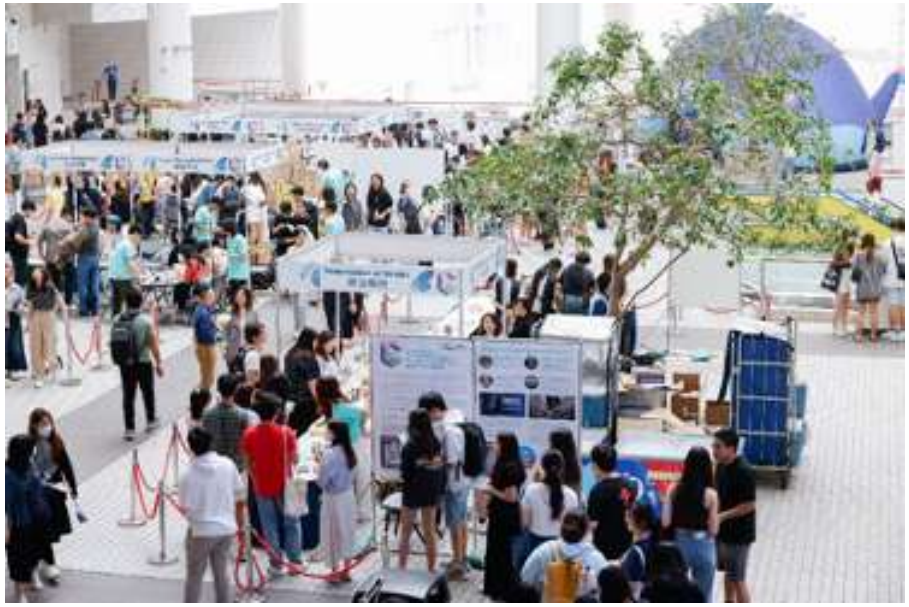
Technology-driven projects were implemented to promote inclusiveness and raise awareness. Innovative initiatives included developing SEN Online Training Modules to educate students and staff, implementing a Virtual Reality (VR) Career Path Training Program for students with special educational needs, expanding the availability of Nap Pods to promote sleep hygiene, and collaborating with the Academic Registry on the AI Ambassador Project. These projects not only provide valuable support but also reflect the University's commitment to staying at the forefront of technological advancements while fostering inclusivity for students with special educational needs.

HEALTH & SAFETY

Mental Health

Check-in Day

Interactive and enjoyable booths at the HKUST Atrium were co-organized by the Counseling and Wellness Center during Check-in Day in April 2024. The event successfully raised awareness about mental health, promoted campus inclusion, and fostered stronger bonds within the HKUST community, attracting over 3,500 participants. Approximately 1,000 participants voluntarily shared their insights, highlighting a notable increase in awareness about mental health resources and the ease of discussing mental health topics.



JUSTalk Series

The JUSTalk Series, a human library campaign, featured invited guests sharing their lived experiences on various topics. This initiative plays a vital role in fostering positive education, enhancing psychological well-being, and dispelling misconceptions surrounding mental illness and professional help-seeking. Many participants have provided positive feedback, highlighting the meaningful interactions with guest speakers and the new insights gained from diverse life experiences, which resonate with their own challenges and encourage open dialogue about mental health and resilience.

From Diversity to Infinity Festival 2023

The annual campus-wide event, From Diversity to Infinity Festival 2023, featured experiential tours, wellness buses, kiosks, and workshops, emphasizing the importance of enhancing students' resilience and confronting emotions as catalysts for personal growth. The event reached over 2,500 individuals within the HKUST community. Some programs were conducted in collaboration with “Shall We Talk,” a mental health promotion and public education initiative launched by the Advisory Committee on Mental Health.

2,500 **individuals engaged in diversity and mental health activities**

COMMUNITY OUTREACH

HKUST Connect Community Engagement Programs

HKUST Connect is a community engagement initiative that aims to build on the University's efforts in raising civic awareness and developing sustainable partnerships with the wider community to deepen student learning and promote a benevolent world.

Global Service Day 2024: A Collective Commitment to Sustainability

In April 2024, HKUST launched the Global Service Day, uniting community members in a powerful demonstration of collective action. This year's campaign focused on supporting several Sustainable Development Goals (SDGs). Through 42 impactful initiatives, the University created a total of 660 volunteer opportunities in collaboration with 34 dedicated community partners.

Despite unpredictable weather conditions, 252 students, 24 alumni, and 32 staff volunteers came together to participate in a diverse array of service projects. Participants rated their sense of social responsibility at 4.51 out of 5, while 4.53 out of 5 agreed that they would continue to serve the community after the program. Their collective efforts not only made a tangible impact on the community but also laid the groundwork for lasting relationships, reinforcing HKUST's dedication to community engagement and sustainable development.

42 impactful community initiatives

660 volunteer opportunities created by the University

34 dedicated community partners collaborated with the University

252 students,

24 alumni, and

32 staff volunteered for service projects

COMMUNITY OUTREACH

Service Learning Trips

During their term breaks, 30 students embarked on two transformative service learning trips to Guilin in mainland China and Nepal, dedicating their time to meaningful and impactful endeavors. These student volunteers delivered enriching educational programs to 200 local primary school children with limited learning resources. Beyond merely providing learning support, they forged deeper connections and cultivated a better understanding of the local communities they served. The experience was marked by the welcoming smiles of the children and valuable insights into diverse cultures.

Students truly embodied the spirit of global citizenship and community care, demonstrating a commitment to quality education. Their experiences not only enriched the lives of the children they served but also fostered a deeper appreciation for the value of education in diverse contexts.

30 students embarked on service learnings trips to Guilin, Mainland China and Nepal

200 local primary students were enriched with educational programs arranged by the University's students

"The teaching and the STEM workshop, though initially challenging, transformed into a platform of learning for both me and the local students. The language barrier, once a hindrance, disappeared with our sincerity. Through connecting with hearts and feelings, I not only taught but also learned from the Nepalese children, gaining insights into their perspectives and aspirations. The inclusive and supportive environment I experienced on this trip will forever change me." (Student, SBM Year 3)

COMMUNITY OUTREACH

HKUST Connect

Student Civic Fellowship

Students actively supported community development initiatives as Student Civic Fellows, with 20 participants dedicating their winter and summer breaks to full-time roles in non-profit organizations and social enterprises. Their efforts were crucial in advancing service initiatives that would otherwise be hindered by a shortage of resources.

As Civic Fellows, students gained firsthand experience with pressing social issues. They developed insights into the root causes of homelessness, advocated for the rights of migrant domestic workers, connected individuals living in subdivided units with vital community resources, and empowered underprivileged children through targeted learning support. Community partners, as co-educators, valued the skills and innovative ideas that the Univesity's students brought to their organizations. This immersive involvement not only enriched HKUST students' understanding of societal challenges but also reinforced their commitment to fostering a more equitable society and driving positive social change within their communities.

Student Civic Fellow's Sharing:
"I had the opportunity to witness how poverty can lead to desperation. Walking up the staircases to higher floors, through corridors filled with rubbish, I saw people living in cramped rooms with poor ventilation, battling mice and cockroaches, and navigating hazardous electrical wires. This experience deepened my understanding of the profound inequalities faced by those experiencing homelessness." (Student, SHSS Year 2, @The Salvation Army Sham Shui Po Family Support Networking Team)

Partner Feedback:
"HKUST students exhibited a higher level of maturity compared to other interns we have hosted. They effectively managed their assigned tasks and proactively contributed to the center's daily operations. Additionally, they maintained excellent communication with both colleagues and service users, fostering a collaborative and supportive environment." (Hong Kong Family Welfare Society Financial Education Centre)

COMMUNITY OUTREACH

HKUST Connect

Impact Projects with Corporate Partnership

SDG 12: Responsible Production and Consumption

This year, HKUST Connect launched two impactful projects in collaboration with corporate partners to promote sustainable consumption. These initiatives focus on utilizing non-plastic takeaway containers and upcycling antimicrobial fabrics to support individuals in need.

The University launched Phase II of the Zero Plastic Takeaway Container Pilot Program in Fall 2023. In this phase, HKUST collaborated with five new catering outlets on campus to use pure plant fiber disposables for takeaway orders. The program provided an opportunity for catering outlets and HKUST members to practice 'plastic-free' at the source while preparing for the implementation of regulations on disposable plastic tableware. Additionally, it contributed to HKUST's waste reduction target under the HKUST 2028 Challenge, which aims to reduce waste sent to landfills by 75% compared to the 2014 baseline year.

In collaboration with INNOTIER, students creatively upcycled leftover antimicrobial Ionic+™ fabrics from manufacturing, transforming end-of-life textile waste into innovative products that leverage the virus-killing properties of the fabric to address the needs of the University's target recipients. The students designed and prototyped oversleeves for street cleaners and armchair organizers for wheelchair users. Volunteer teams then engaged with the community to deliver the handcrafted products to those in need to demonstrate HKUST's care.

5 caterers collaborated with HKUST to use pure plant fiber disposables

COMMUNITY OUTREACH

Sustainability/Net-Zero Office

External School Tours for Sustainability

To further expand their influence on the University's neighborhood, the team hosted engaging and informative sharing sessions for Clearwater Bay School Year 6 students on a range of sustainability topics. The collaboration extended to junior students visiting HKUST's clothes swap event, rooftop solar panels, and community garden. The school also participated in a musical performance at the HKUST Garage Sale.

The students and parents of the campus's Busy Bees Kindergarten spent half a day at the community garden learning about biodiversity and organic farming.

GOVERNANCE

HKUST has adopted sustainability for the the University and the world as one of the five strategic objectives in the 2031 strategic plan.

In alignment with this direction, the University has published a number of policies to manage the new buildings' carbon footprint and the natural resources, and working groups to steer the University's resources toward its commitment.

In addition, HKUST has placed more emphasized on the potential climate risks by adopting the reporting framework by Task Force on Climate-Related Financial Disclosure (TCFD).

OVERVIEW

It is HKUST policy to ensure full transparency of data and progress for all areas of the 2028 Sustainability Challenge, including all key performance indicators (KPIs) and other measurable items. The operational focus area of the HKUST 2028 Sustainability Challenge includes specific goals and targets in five priority areas:

- Energy/GHG Emissions
- Waste to the Landfill
- Water Consumption
- Landscape and Biodiversity
- Community Wellbeing

These five priority areas are bound by HKUST's policy on transparency of sustainability data and include indicators that can measured so that the broader community can have access to the real data that indicates our progress and performance over time. The recent data for each of the indicators is posted on the Progress and Performance page of the Sustainability / Net-Zero Office website. The Sustainable Operations Executive Committee (OpCo) chaired by the Vice President for Administration and Business oversees the implementation of the progress and performance of this sustainability master plan and reviews and reports progress to the campus community.

Enhanced Governance

The University's policies and guidelines establish the foundation for an inclusive and equitable culture, guiding the conduct and actions of HKUST members. Key documents include the Equal Opportunities and Anti-discrimination Policy, Procedures for Handling Discrimination/Harassment Complaints, Prevention and Handling of Discrimination and Harassment: Guidelines for Supervisors and Managers, and Inclusive Language Guidelines.

75 staff members were nominated by Unit Heads to serve as Diversity and Equal Opportunities (DEO) Resource Persons—the first points of contact in their respective schools, departments, or units for advice on discrimination and equal opportunity issues. Training for this group was conducted in early January 2024.

The Diversity and Equal Opportunities Committee convened twice to review reports from relevant offices and discuss strategies for enhancing diversity, equity, and inclusion at the University.

ORGANIZATION

Sustainable Operation Committee (OpCo)

In line with the HKUST 2028 Sustainability Challenge, the University has established the Sustainable Operation Committee (OpCo) under the guidance of the Vice President for Administration and Business (VPAB). The primary purpose of this committee is to provide advice and guidance on projects aimed at achieving sustainability targets within campus operations. The OpCo convenes monthly meetings to discuss and assess the progress of these initiatives.

The committee comprises a diverse group of members, ensuring representation from various stakeholders, including representatives from different administrative offices, faculty members, and both undergraduate and postgraduate students. This diverse composition enables the OpCo to incorporate different perspectives and opinions into its decision-making.

During each meeting, committee members engage in a comprehensive review of ongoing projects, assessing their progress and impact. Additionally, they have the authority to approve proposed initiatives that align with the sustainability objectives of the University. Through these regular meetings, the OpCo plays a crucial role in monitoring and advancing sustainability efforts within HKUST's campus operations.

To advance the Net-Zero Action Plan, OpCo will also oversee the progress and performance of campus operations, new buildings, campus renewal, and adaptation and resilience measures. It will ensure that funding and resources are available and allocated to meet the interim and long-term goals of the Plan.

ORGANIZATION

Working Groups

Several working groups have been formed to implement the plans set by the OpCo and to communicate with frontline workers on how to incorporate these plans into routine campus operations.

Green Labs Working Group

The Green Labs Working Group is an action-oriented team. It also receives support from the Green Lab network, which includes users from the Building Service team, Laboratory Service team, and HSEO labs. The primary focus of this group is to address energy, waste, and water-related issues within laboratories. They achieve this by conducting thorough analyses through measurement and establishing key performance indicators (KPIs). The Green Labs Working Group is dedicated to implementing sustainable practices and promoting efficient resource management in lab environments.

Energy Leadership Team

The Energy Leadership Team, previously known as the Energy Technical Working Group, consists of faculty members from the faculty, as well as representatives from the operational offices. This collaborative team is dedicated to exploring a comprehensive perspective on energy-related matters, including over-cooling and other technical challenges, by leveraging the potential of big data.

Student Wellness Working Group

The Student Wellness Working Group was established to develop a university-wide inventory of student-related surveys and well-being measures for benchmarking and assessing progress. It aims to develop demonstrations and recommendations for space design and underutilized areas that promote student wellness. Improvement works are being planned for the hallways and ground floor courtyards in the Main Academic Building to make them more conducive for students to take a break and socialize.

Cleaning Steering Committee

The Cleaning Steering Committee consists of representatives from the operational teams and cleaning contractors. They meet bi-monthly to discuss waste and recycling management, review data, conduct food waste audits, and prioritize the well-being of cleaners. The committee also promotes the use of environmentally friendly cleaning agents, ensuring efficient and sustainable cleaning practices at HKUST.

Water Reduction Working Group

The Water Reduction Working Group identified water-saving strategies across various functions, including student halls, catering outlets, cooling towers, laboratories, and irrigation. Smart and/or Grade 1 showerheads will be replaced for nearly 100% of the showerheads in the student halls. Baseline monitoring of irrigation demand is also underway.

Biodiversity Steering Committee

The Biodiversity Steering Committee comprises representatives from the operational teams and the landscape contractor. They meet bi-monthly to review landscape operations and discuss sustainable landscaping practices. Their main objective is to enhance biodiversity within the campus environment at HKUST.

ORGANIZATION

Student Participation in Decision-Making

Students actively participate in the governance of the University through various means, including serving as members of university bodies and conveying suggestions to staff members, both formally and informally. One method of participation is through joining the Students' Union, an unincorporated association formed by HKUST students who choose to register as its members, operating independently from the University.

In addition to joining the Students' Union, student representatives hold seats on several University Committees that play decision-making or advisory roles in policy formulation and management matters. The two major types of committees that include students as members are:

1. The University Senate: The supreme academic body of the University.
2. Committees of the Senate, including:
    - Committee on Undergraduate Studies
    - Committee on Postgraduate Studies
    - Committee on Teaching and Learning Quality
    - Committee on Student Affairs
    - Student Disciplinary Committee

To fulfill the role of committee members, student representatives are encouraged to consult their fellow students for opinions and be prepared to exercise their Some of the student representatives are elected into the office while others are selected from the student body.

GUIDELINES FOR SUSTAINABLE OPERATIONS

Procurement Safeguards

To pursue future fitness, HKUST anticipates the negative impacts that its procured goods and services may contribute to. A key component of HKUST's strategy towards its waste reduction goal is recycling at the end of each product's life and effectively disposing of hazardous materials under regulatory control. The University is committed to handling recycled materials in an environmentally responsible manner throughout the process. For electronics, HKUST partners with WEEE Park to collect old electrical appliances. Food waste is delivered to O-Park, a government-supervised facility, where it is recycled into biogas and compost using anaerobic digestion and composting technology.

As stated in the HKUST Sustainable Purchasing Requirements for Suppliers and Contractors and HKUST Operational Guidelines on Sustainable Purchasing for Departments, HKUST encourages the purchase of appliances that have Energy Label Grade 1 and water appliances that meet "Water Sense" Grade 1 conservation criteria. Additionally, HKUST employs TCO Certified and EPEAT, global third-party sustainability certifications, for personal IT equipment to assess potential drawbacks arising from IT equipment purchases. For cleaning products, meeting Green Seal certification is encouraged to ensure compliance with health and environmental criteria.

Procurement Guidelines

As stated in the HKUST Sustainable Purchasing Requirements for Suppliers and Contractors and HKUST Operational Guidelines on Sustainable Purchasing for Departments, HKUST encourages the purchasing of appliances that have Energy Label Grade One and water appliances that achieve "Water Sense" conservation criteria. Additionally, HKUST advises departments to buy in bulk to reduce packaging costs and select environmentally friendly office supplies to promote the sustainable use of materials. HKUST also has precautionary measures for negative impacts in sustainability performance evaluation. The University requires tenderers to include sustainability elements and preferences to have a better understanding of each contractor's commitment to sustainable practices. Preference will be given to tenderers who are evident in promoting environmental sustainability in their tender submissions.

Sustainable Office Standards and Guidelines

The HKUST Sustainable Office Standards and Guidelines encourage energy-efficient practices, waste reduction, sustainable sourcing of materials, and eco-friendly communications for renovations. A sustainable renovation section was added to the latest revision to encourage the use of energy-efficient lighting and temperature controls, together with office layout, office furniture and equipment, and staff wellbeing.

GUIDELINES FOR SUSTAINABLE OPERATIONS

Net-Zero Building Standards

New buildings have two carbon challenges: (1) how they can be constructed in ways that minimize the amount of carbon released during the construction process (also known as “embodied carbon”), and (2) how to design the buildings so that the minimize additional carbon emissions over the life of the building. Both of these challenges increase the footprint of the campus and make it more difficult to reach the net-zero targets.

Specific strategies for minimizing these emissions are contained within the newly launched HKUST Net-Zero Carbon Building Standards. These strategies include a combination of high standards and requirements, plus incentives for design teams to act aggressively in reducing carbon in new buildings. These standards set benchmarks for the minimum performance for all new capital projects and major existing building alterations and additions over 5,000 square meters, and have been issued as part of the University’s new Research Building 3 tender documents. An accompanying online contractor training module will be available to contractors and suppliers to further explain its application.

Tree Felling and Planting Policy

HKUST has made a significant commitment to sustainable campus development with the publication of its Tree Felling and Planting Policy. This policy establishes guidelines that all contractors and consultants engaged in development projects on the HKUST campus must adhere to, emphasizing the importance of responsible tree management.

While acknowledging that some trees may need to be removed within project boundaries, HKUST is dedicated to maximizing the full range of value derived from these resources.

Under this policy, contractors and consultants are responsible for ensuring that their activities do not pose risks to existing trees beyond the project boundaries. They are also required to implement measures to protect trees during the development process, including pre-construction assessments, sustainable tree felling, and responsible replanting.

COMMITMENT

Adopt a Public Commitment to Ethical Conduct

Over the past few years, Hong Kong has faced challenges from health crises, fractures, and conflicts. Despite these obstacles, HKUST has strived to uphold apolitical principles and concentrate on the University's basic principles which include academic freedom, diversity, inclusivity, and mutual respect. These values all serve as the cornerstones of HKUST's academic environment. Since the inception of the University, HKUST has been staunch supporters of such openness and the institution commits to holding to that position in the future.

As part of HKUST strategic plan from 2021 to 2028, the University is committed to continuously protecting its core principles and values by exercising individual and institutional integrity. HKUST will provide financial and human resources to address all these issues and needs.

HKUST's Sustainability Partnerships

To demonstrate HKUST's unwavering commitment to whole-institution sustainability, the University has proudly become a member of the International Sustainable Campus Network (ISCN), the Association for the Advancement of Sustainability in Higher Education (AASHE), the Sustainable Development Solutions Network (SDSN), Hong Kong Sustainable Campus Consortium (HKSCC).

Through connecting and collaborating with campus sustainability experts worldwide, the University aims to share its best practices, flagship programs, and projects with peers via its websites, newsletter, and social media platforms. HKUST's enduring commitment to sustainability leadership is aimed at positively influencing the regions and communities in which the HKUST community work, live, and learn.

Establish Internal Controls to Ensure It Lives Up to the Public Commitment

HKUST is dedicated to upholding high ethical standards and operational integrity. Improper acts, behaviors, or practices that are illegal, unethical, or against the core principles of HKUST could affect the University stakeholders and negatively impact its reputation.

To uphold the highest standards of professionalism and integrity, the University has published the Employee Handbook, which outlines the standards of professional conduct, such as acceptance and use of donations, avoidance of corruption and bribery, and conflict of interest in procurement duties, to which all employees are expected to adhere. Seminars or training on Personal Data Privacy are organized periodically to provide staff members with the knowledge and skills they need to handle personal data.

COMMITMENT

Staff Support

Living Wage Guarantee

HKUST is committed to ensuring that all employees and contractors serving on the campus receive at least a living wage, which exceeds the statutory minimum wage and covers all living expenses without relying on external assistance. Consequently, all contract workers, including those in security, landscaping, cleaning, and food services, are evaluated, and new contracts now include provisions ensuring their employees are paid a living wage.

Employment of Children Regulations under Employment Ordinance (Cap. 57)

HKUST abides by the Employment of Children Regulations, made under the Employment Ordinance (Cap. 57), which prohibits the employment of children in non-industrial establishments, so as not to interfere with their schooling.

Protection under Employment Compensation Ordinace (Cap. 282)

Employees receive support for their time loss through protection from the Employment Compensation Ordinance (Cap. 282). This ordinance applies to situations where an employee, during employment, suffers injury or damages. Protection includes no-fault compensation without needing to prove the fault of any party.

Whistleblowing Policy

A whistleblowing mechanism is in place to enable all stakeholders of the University to raise concerns with the appropriate authorities regarding any malpractice within the University. HKUST adheres to its Whistleblowing Policy to ensure members can raise concerns confidentially, with a strict no-retaliation policy against whistleblowers.

Grievance Procedures

HKUST has established Staff Grievance Procedures to address employment-related concerns impartially and promptly. Supervisors are responsible for actively listening to staff members' concerns and resolving them informally whenever possible. Face-to-face communication is encouraged, and if an informal resolution is reached, a written record should be kept. If an issue cannot be resolved informally, staff members can formally raise the matter following prescribed procedures.

COMMITMENT

An Exemplar of Best-in-class Sustainable and Quality Practices

As part of the HKUST Strategic Plan 2031, part from physical infrastructure, the University must also create and uphold a digital environment that unlocks the potential of its people.

Doing so requires enhancement of digital and data capabilities of HKUST members. The University will not only ensure timely and sufficient provision of digital tools but also foster a culture of data literacy and digital adaptability on campus. A key element is to forge a robust data strategy that guarantees data quality, security, and accessibility. Investment in hardware infrastructure, including high performance computational facilities, is also essential in the fast-changing environment.

Striving to be a sustainability leader across the region and beyond, HKUST is taking various steps to renew its commitment to net zero carbon. A notable way is to meet the measurable targets of the ongoing 2028 Sustainability Challenge in areas of energy, water, landfill waste, biodiversity, and wellbeing.

Another critical step is to develop and implement a Net Zero Action Plan that aspires to achieve the net zero emissions goal by 2045 through new building standards, operation improvements, sustainability education, knowledge advancement, and investments. Together, the University will create the conditions for the HKUST community to thrive sustainably within planetary resource boundaries.

The University recognizes that its aspirations will require additional financial resources. While exploring different financing options and seeking to diversify income streams, HKUST will exercise prudence in financial planning to ensure adequate resources for the campus's existing operations and new strategic initiatives. HKUST's fundraising capabilities and support network will be advanced and extended for sustainable development of the University.

Financial Assets Safeguard the Pursuit of Future-Fitness

HKUST is the first university in Hong Kong to pledge to eliminate investments in fossil fuels, with a concrete environmental, social, and corporate governance (ESG) investment strategy to demonstrate the University's commitment to being a sustainability leader across the region and beyond.

As an investor with a long-term vision, HKUST will adopt a Net-Zero Carbon Investment Strategy by working closely with investment managers for whom ESG considerations are integral and manifested throughout their investment process. HKUST seeks to gradually remove investments in fossil fuels from its "in-scope assets" – mainly public equities and public fixed income, which make up the majority of HKUST's long-term investment portfolio. At the same time, the University will allocate around 5% of its investment to companies that offer climate solutions.

This strategy ensures that the investment approach is consistent with the scientific consensus on climate change and the goals of the Paris Agreement, as operationalized by the Science-Based Targets initiative. By 2030, 100% of in-scope assets will be invested in companies that have adopted the Science-Based Targets.

The strategy has three broad goals:

1. To ensure the risks and opportunities arising from a low-carbon transition are reflected in the way investments are chosen for the portfolio.
2. To seek out investments whose activities can profitably accelerate or otherwise support the low-carbon transition.
3. To support and encourage all businesses to adopt business plans and strategies consistent with the goals of the Paris Agreement.

COMMITMENT

Joint Declaration on Embracing a Living Lab Approach to Promote Carbon Neutrality

According to the latest Intergovernmental Panel on Climate Change (IPCC) report, the window of opportunity for limiting global warming to 1.5 °C is rapidly vanishing. To collectively avoid the worst effects of climate change, there is an urgent call for implementing deep and sustained reductions in greenhouse gas emissions. The United Nations Sustainable Development Goal 13 also recognizes climate change as a key barrier to sustainability and highlights the important and interconnected role climate action plays in securing a sustainable future for all.

HKUST Recognizes:

- The University plays a vital role in driving research and innovation needed for society to avoid the worst effects of climate change.
- As an institute of knowledge creation, HKUST's unique responsibility to ambitiously advance solutions for carbon-neutral campuses will shape and contribute to a sustainable future for all.
- In pursuit of carbon neutrality, the University regards its physical campuses as “living labs” that represent a vital asset in the research and development of solutions, serving as test-beds for hands-on learning and advancing applied research.

HKUST Pledges to:

- Affirm and uphold the UN Sustainable Development Goal 13 to take urgent action to combat climate change and its impacts.
- Create and uphold an environment that encourages hands-on research and learning by students, staff, and faculty that advance novel ideas contributing to carbon neutrality.
- Proactively foster diverse partnerships among campus stakeholders to promote campus-based testing and learning.
- Share and exchange best practices in “living lab” initiatives and embrace opportunities to test, demonstrate, and advance research on campus that reduces greenhouse gas emissions from campus operations.

COMMITMENT

CARE 2024 Conference

The Climate Adaptation and Resilience Conference 2024 (CARE2024) is a large-scale climate adaptation event organized by HKUST, attended by a total of 90 students, staff, and external guests.

The three-day conference focused on the topic "Surviving the Heat – Research Advances and Resilience Strategies to Urban Heat Extremes". It took an interdisciplinary approach and incorporated a wide range of relevant knowledge and perspectives to enable rich discussions among scholars from around the globe on urban heat-related issues.

During CARE2024, the conference began with discussions on "The Physical Science," which examined the complex nature of extreme heat events in East Asia and the atmospheric mechanisms behind increased heatwave intensity. This highlighted the need for robust strategies to mitigate extreme heat.

On Day 2, the focus shifted to "Risk, Impacts, and Adaptation," where innovative cooling solutions and strategies for climate resilience were explored, along with the intersection of heat, mental health, and urbanization, emphasizing the need for socially inclusive responses. The conference concluded with the "Surviving the Heat Forum," where experts addressed the challenges of extreme heat in East and Southeast Asian cities, underscoring the importance of individual and collective action in response to unprecedented heat risks.

Overall, CARE2024 stressed the necessity for integrated and inclusive adaptation strategies from city stakeholders to effectively tackle the escalating risks posed by climate change and urban development, aiming to inspire meaningful action towards a more sustainable, climate-resilient future.

RISKS

HKUST's overall risk profile and the 2023-24 Strategic Risk Register will be regularly reviewed to ensure appropriate risk mitigation measures align with the University's latest developments and strategic objectives. The following summary highlights key aspects of the 2023-24 annual risk assessment results:

Strategic Risk Management

The Strategic Risk Management policy and process play an important role in the University's governance. HKUST's Council and its Audit Committee oversee risk management, while the University's management conducts an annual risk assessment exercise to identify, monitor, and manage strategic risks.
HKUST upholds its core values and formulates relevant policies and guidelines to guide its community. In 2023-24, in response to a fast-changing environment, demographic shifts, and a return to normalcy post-COVID-19, the University focused on addressing resource shortages, talent recruitment and retention, administrative efficiency, and land acquisition for strategic development.

The University's Senior Management engaged an external consultant to (a) facilitate the 2023-24 Annual Risk Assessment Exercise and (b) evaluate HKUST's existing Risk Management governance and framework. The 2023-24 risk assessment process was enhanced to include (i) a Risk Questionnaire for heads of academic and non-academic departments/units, and (ii) workshops for key stakeholders to ensure a robust assessment with broad participation.

RISKS

Reputational Risks

The University's Senior Management actively monitored external and internal factors that could impact its reputation, considering feedback from various stakeholders. In addition to strategic recruitment for faculty, staff, and students, HKUST identified opportunities for promoting international collaborations to showcase research impacts and developed innovative programs in areas like Environment, Social, and Governance to tackle global challenges.

Efforts were made to enhance cross-campus coordination with HKUST (Guangzhou) (GZ). Under the "Unified HKUST, Complementary Campuses" principle, both the Clear Water Bay and Guangzhou campuses work cohesively to support the economic, social, and cultural development of Hong Kong, the Greater Bay Area, and the Mainland.

Financial Risks

As a publicly funded university, HKUST ensures accountability and value for money by optimizing resources while achieving strategic goals and maintaining financial sustainability. The University adopts a prudent approach to financial planning and budgetary controls to uphold a healthy financial status while supporting key initiatives, including faculty recruitment, capital projects, and research infrastructure.

Although HKUST and HKUST (GZ) operate as separate legal entities, their partnership enhances research impact and maximizes operational resources. Investment risks in volatile financial markets are monitored by the Council's Finance and Audit Committees, which formulate investment strategies with acceptable risk profiles and return objectives. The University consults external professionals to adjust its investment strategies as needed to strengthen financial stability.

RISKS

Operational Risks

HKUST continuously enhances its operating processes and procedures by assessing risks from various perspectives. The University prioritizes talent development, with various Schools and Offices focusing on recruiting and nurturing diverse strengths. Additionally, HKUST emphasizes creating a safe environment to protect the health and safety of its members. Cybersecurity issues are actively discussed within the University community, and awareness of personal data protection has been increased in FY2023-24.

Climate Risks

The campus has several features that make it critical the University address the risks of expected changes to the climate; first, the campus is on steep slopes that funnel large volumes of rainwater into ravines and engineered concrete trenches. Data from the Hong Kong Observatory indicates that annual rainfall has increased by an average of 2.2mm per year with expectations of this increase continuing.

Secondly, the campus is on a coastline so storm surges and other coastline events may have bigger impacts than if further inland. It means the campus is also more vulnerable to a rise in mean sea levels, which have risen by a rate of 32 mm per decade since the 1950s.

Thirdly, the campus is surrounded by natural forests which may be vulnerable to fires during extended droughts. Further, increased heat within the forested areas may impact insects, mosquitoes and other biodiversity systems that could manifest into health concerns for the campus community.

To prepare the campus for these impacts, the overarching strategy will be to implement measures that allow HKUST to adapt to some changes and become more resilient to others. The strategy will be undertaken through six Action Items:

1. Focus on redundancy of slopes through maintenance and design to ensure their stability.
2. Develop measures to protect the coastline from storm surges and rising seawater levels.
3. Prepare for extreme by heat developing standards for workers and monitoring systems for airborne illnesses and other stresses on campus biodiversity.
4. Adopt measures to reduce the urban heat island effect within the campus to mitigate further heating within the campus microclimate.
5. Adopt “sponge city” measures to ensure that when heavy rainfall events occur, the campus can deflect the large volumes of rainwater away from buildings and critical infrastructure.
6. Create new policies on remote learning, working from home, and flexibility in job functions to flow more easily to flow into alternative work and learning patterns during extreme weather events.

RISKS

Task Force on Climate-related Finanical Discolosure (TCFD)

The Task Force on Climate-related Financial Disclosure (TCFD) is a reporting framework established by the Financial Stability Board (FSB), it offers investors insights into how companies are addressing climate change risks and being transparent about their governance practices.

To showcase HKUST commitment to responsible environmental stewardship, this year HKUST has integrated the framework into the ESG report for a comprehensive analysis of the climate risks and opportunities faced by the campus, and the University's response to them. The report is structured according to four pillars recommended by the TCFD, which are Governance, Strategy, Risk Management, and Metrics & Targets.

Governance

While the ultimate goal is to achieve a level of net-zero emissions by 2045, HKUST have interim goals and targets to ensure we are on track and the progress is overseen by 5 bodies: The Sustainable Operations Executive Committee, The Sustainable Smart Campus as a Living Lab, The Sustainability / Net-Zero Office, HKUST's Senior Leadership, and The Net-Zero Education Committee which is in proposal stage.

Strategy

To become a better environmental steward, the university strives to assess and mitigate risks. HKUST acknowledges that the climate crisis poses risks that disrupt regular functioning of our university operations and assets. In 2018, Typhoon Mangkut serves as a wakeup call on the dangers of a coastal campus. The devastating super typhoon destroyed the seawalls and the access road leading to the sports front areas, which disrupted our assets and regular operations. In addition, increased capital expenditure on write-offs and early retirement of existing assets burdens our financial conditions.

However, there are many opportunities that the University can realize. With our forward-thinking mindset in transforming our campus, leadership commitment to achieving net-zero emissions, and sustainability efforts by our community members, we can capitalize on opportunities in the low-carbon market and mitigate risk upon the threat of climate crises.

The University utilizes the TCFD framework to classify risks. It defines short-term risks as those occurring within one to five years, medium-term risks as spanning five to ten years, and long-term risks as extending beyond ten years.

RISKS - TCFD

Strategy for Physical Risk

HKUST has identified the following climate-related risks that pose challenges to the mitigation of climate change:

Acute Physical Risk	Time frame	Impact	Financial implications	Our Reponses
 **Increased climate events disrupting regular university operations**	Short Term	• More frequent and severe weather events impact our staff's work commute, which reduce their productivity. Also, the quality of teaching may decrease due to the cancellation or delays in course delivery.	• Cost for purchasing additional hardware or software to support hybrid learning environments. • Cost of hiring external contractors or manpower to support recovery of operations.	• To provide flexible work strategies for our staff and faculty to continue work during the weather event.
 **Increased climate events damaging our university's assets and properties**	Short Term	• More frequent and severe weather events damage assets and properties, including dormitories, laboratories, and classroom, as well as infrastructures like seawalls. Also, there is potential for increasing insurance premium on assets in "high-risk" locations, i.e. at our coastline.	• Immediate operational expenses for campus clean-up, repairs, and restoration of facilities after storms, floods, or other events. • Extra capital expenditures for investments in slope reinforcement, improving capacity of drainage system.	• To provide maintenance work for slopes to develop their stability and resilience under climate-related hazards. • To conduct regular monitoring and inspection of the breakwater infrastructure, as well as the building and facilities at the water's edge.

Strategy for Physical Risk (Cont.)

HKUST has identified the following climate-related risks that pose challenges to the mitigation of climate change:

Chronic Physical Risk	Time frame	Impact	Financial implications	Our Reponses
 **Rising mean temperatures disrupting regular university activities**	Short-to-Mid Term	• Increased temperature makes our students, faculty, and staff, especially for maintenance and outdoor workers exposed to heat stress or other chronic respiratory diseases. • Increased energy demand and intensity might create energy shortage or blackout.	• Higher insurance premium due to the increased insurance cost for our people. • Disruption of outdoor events and maintenance work. • Project completion delays at the means of avoiding heat extremes causes increase in overall cost. • Increased electricity utility costs due of higher frequency of use of air conditioning and water utility costs to maintain campus landscaping due the increased water irrigation demand.	• To review work protocols and safety manuals for staff and contractors who works outdoors. • To prepare monitoring systems for airborne illness and other stresses on campus biodiversity.
 **Rising sea levels disrupting regular university operations**	Medium-to-Long Term	• More frequent and severe weather events damage assets and properties, including dormitories, laboratories, and classroom, as well as infrastructures like seawalls. Also, there is potential for increasing insurance premium on assets in "high-risk" locations, i.e. at our coastline.	• Increased maintenance costs required for the facilities close to our coastal line. • Increased upgrading costs required for building a more resilient and higher sea walls.	• To conduct regular monitoring and inspection of the breakwater infrastructure, as well as the buildings and sports facilities at the water's edge.

Strategy for Physical Risk (Cont.)

HKUST has identified the following climate-related risks that pose challenges to the mitigation of climate change:

Chronic Physical Risk	Time frame	Impact	Financial implications	Our Reponses
 **Changes in precipitation patterns and extreme variability in weather patterns**	Short Term	• Fluctuating precipitation creates intermittent droughts or heavy rainfall, which potentially result in forest fire or regional flooding of low-lying area of the campus.	• Increased operating expenditures in potential post-extreme weather event clearance work and maintenance for damages in HKUST's assets and infrastructures.	• To keep the water away from basements. • To keep waterproofing membranes on rooftops surfaces secure. • To maintain seals around windows and doors to prevent water from entering buildings when being driven by wind. • To keep drains clear from blockages.

Strategy for Transitional Risk

HKUST has identified the following climate-related risks that pose challenges to the transition to low-carbon economy:

Policy and Legal Risk	Time frame	Impact	Financial implications	Our Reponses
 **More stringent decarbonization and energy efficiency regulations**	Medium Term	More stringent decarbonization and energy efficiency regulations are expected in the medium term. Hong Kong's Climate Action Plan 2050, and the potential establishment of carbon pricing will gradually pressure carbon emitters to reduce GHG emissions.	• Potential fines for not able to comply emissions-reporting obligations or exceeding legal carbon emitting limit. • Increased capital expenditure for write-offs, asset impairment, and early retirement of existing assets due to policy changes. • Increased investment in renewable energy.	• To adopt "everything touched" approach to improve our residential halls, labs, and staff quarters to reduce energy usage and maximize the carbon emissions. • To continue to invest in the "smart" infrastructure backbone of meters, sensors, monitors, and other data collection and visualization measures.

Technology Risk	Time frame	Impact	Financial implications	Our Reponses
 **Aging of assets and properties elevates emissions**	Short Term	Our ageing buildings with high energy consumption.	• Potential fines for not being able to comply with emissions-reporting obligations or exceeding legal carbon emitting limit. • Increased capital expenditure for write-offs, asset impairment, and early retirement of existing assets due to policy changes. • Increased investment in renewable energy.	• To replace and upgrade outdated building envelope and equipment to enhance its efficiency to reduce cost and decrease carbon emissions.

Strategy for Transitional Risk (Cont.)

HKUST has identified the following climate-related risks that pose challenges to the transition to low-carbon economy:

Market Risk	Time frame	Impact	Financial implications	Our Reponses
 **Limited resource availability and higher pricing**	Medium Term	• Limited suppliers and contractors who are able to source their raw materials sustainably and manufacture with low environmental impact.	• Increase cost related to new supplier selection and negotiations. • Increase the cost for improving our suppliers' capabilities and knowledge to reduce carbon emission in low-carbon community.	• To provide guidelines and training materials on sustainable procurement for staff, contractors and suppliers. • To track carbon emissions of purchased goods and services baseline to identify major purchases.

Reputation Risk	Time frame	Impact	Financial implications	Our Reponses
 **Increased stakeholders' concern**	Short Term	• Failure to align with global sustainability trends can tarnish HKUST's reputation as a leader in science and technology.	• Reduced funding opportunities, especially from donors or grants focused on sustainability performance.	• To create funding pathways for research and implementation of campus-based energy production and carbon removal. • To establish a global research alliance of like-minded universities to utilize our campuses as living labs for sharing and collaborating on decarbonization solutions.

Opportunites

HKUST has recognized climate-related risks also present opportunities in advancing transition to a low-carbon economy:

Type of Opportunities	Risk and Opportunity Drivers	Potential Financial Impacts
 **Energy source**	• Engage in the carbon market to offset emissions. • Participate in green power purchasing programs.	• Reduce exposure to future fossil fuel price increases. • Reduce exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon. • Return in selling excessive green energy through "feed-in tariff".
 **Education**	• Differentiate from our counterparts to attract researchers and students. • Gain global reputation and leadership in climate action and sustainability foster partnerships and provide research opportunities. • Provide dedicated research exposure for researchers and students. • Attract donor and research grants to support sustainability-focused projects. • Integrate sustainability and climate change topics in curriculum. • Develop educational programs on renewable energy and carbon markets.	• Create funding pathways for research and implementation of campus-based energy production and carbon removal • Establish a global research alliance of like-minded universities to utilize our campuses as living labs for sharing and collaborating on decarbonization solutions. • Create course content and hands-on extra-curricular programs to engage students throughout their programs to build sustainability thinking skills and problem-solving competencies. • Develop educational resources for the professional staff of the broader Hong Kong community. • Enhanced institutional reputation makes HKUST more appealing to prospective students and researchers.

Opportunites (Cont.)

HKUST has recognized climate-related risks also present opportunities in advancing transition to a low-carbon economy:

Type of Opportunities	Potential Opportunities	Potential Impact
Resource efficiency	• Reduce water and electricity consumption. • Build more efficient buildings.	• Reduce energy and water utility costs by adopting resources-efficient system.
Resilience	• Increase climate resilience to protect people, assets, and properties. • Increase power and materials supply resilience .	• Provide well-prepared measures to tackle climate-related crisis. • Reduce annual insurance premiums through infrastructure upgrades.

RISKS - TCFD

Risk Management

For identification and assessment of climate-related risks, HKUST identifies extreme weather events and investigate to what extent they are affecting us. After that, the university manages those risks through an overarching strategy to implement measures that allow us to adapt to some changes and become more resilient to others. **For more information of our approaches for building resiliency and adaptability to mitigate climate risks, please found on [Governance-Overview-Climate Risks]**.

Furthermore, University's ESG Investment policy integrates climate-related risks into its investment decision making process. This investment strategy incorporates climate change consideration, ensuring that the risks and opportunities arising from a low carbon transition are reflected in the way investments are chosen for the portfolio.

HKUST has effectively managed its climate risks. Recent update on our sustainability plan reveals comparable reductions in water consumption, waste to the landfill, and overall campus sustainability. Those reduction improvements allow the University to better mitigate resource depletion, enhance resilience, and adapt to rapidly changing environment to climate crisis. To track our progress and oversee sustainability performance, there are 5 bodies: The Sustainable Operations Executive Committee, The Net-Zero Education Committee, The Sustainable Smart Campus as a Living Lab, The Sustainability / Net-Zero Office, and HKUST's Senior Leadership. For more information of responsibility for the oversight and stewardship of the Net-Zero Action Plan, please found on [net-zero statement page]

Metrics and Targets

As part of the HKUST 2028 Sustainability Challenge, the University has set goals to reduce greenhouse gas (GHG) emissions. HKUST's target is to achieve a 40% reduction in GHG emissions (Scope 1 and 2) by 2028 using 2014 as the baseline year, and the level of net-zero by 2045. The 2023-24 academic year continued to show the University's commitment to this challenge through a 33.92% decrease in total Scope 1 and 2 GHG emissions compared to the 2014 baseline. HKUST's Scope 3 emissions for this year is a 23.37% decrease from the previous year. Scope 3 emissions currently encompass indirect emissions from fresh water, sewage water, and paper waste processing.

HKUST is counting Scope 3 emissions using the standards set by the Environmental Protection Department (EPD). **For more information of the University's greenhouse gas emissions statistics, please found on [Env Performance- Pollution].**

EDUCATION

HKUST aspires to take a leadership role in driving positive changes in education and research, empowering the next generation to address global challenges. Expanding our academic horizons and capabilities will push the boundary of excellence. The University understand that education does not sit by itself, it is integrated into the campus, experiential learning, and operations.

This year, the University has been advancing it's efforts to transform the campus into a Living Lab by expanding the scope of projects to accept external partners and those that can advance our net-zero progress.

TEACHING AND LEARNING

HKUST's commitment to community education is evident through its various impactful initiatives throughout the academic year.

Evaluation of Sustainability Coursework

In the 2023-2024 academic year, all schools included at least one course related to sustainability education in their course offerings. A total of 86 newly offered courses were reviewed and 11 new courses were added to the sustainability course inventory. Additionally, 2238 graduates (94% of the total graduates) had enrolled in at least one sustainability course throughout their undergraduate education. Of those, 1577 (66% of all graduates) completed two or more sustainability-focused courses and are graduating with 'strong exposure' to sustainability issues/concepts. Around 6% would have graduated with no course exposure to sustainability, reflecting a similar trend to previous years.

94% **of total graduates enrolled in at least one sustainability course in their undergraduate education**

Staff Training Module in Sustainability

The Life Cycle Thinking for Sustainability staff training online modules were launched by the HKUST Life Cycle Lab. These modules are designed to empower staff with the knowledge and skills needed to make sustainable decisions based on life cycle analysis, life cycle cost analysis, and systems thinking. Through the use of case studies to illustrate practical applications, staff gain an understanding of the long-term impacts of decision-making processes, the environmental impact of a product throughout its various life stages, the interconnected components within a system, and the importance of analyzing life cycle costs and long-term benefits rather than solely considering initial costs.

HKUST Sustainability Education Community of Practice (SEC)

In line with its goal of promoting collaboration in the development of sustainable education resources, the Sustainability Education Community of Practice (SEC) hosted a Sustainability Education (SE) games workshop in April 2024. The workshop featured two sustainability-focused games: (i) Urban SDG-Voyagers (on Sustainable Tourism) by The Chinese University of Hong Kong, and (ii) the Milk Co. Life Cycle Challenge developed by HKUST. Additionally, the LOOP Game (on Sustainable Consumption) by Blackbody Limited and the Climate Change Take Action card game by The University of Hong Kong were introduced.

Participants from various backgrounds, including universities, NGOs, and corporations, enjoyed learning about sustainability concepts through serious games. Many remarked on the innovative nature of this gamified learning approach and were inspired to consider how they might utilize gamification in their own institutions or companies to promote deeper engagement with sustainability issues.

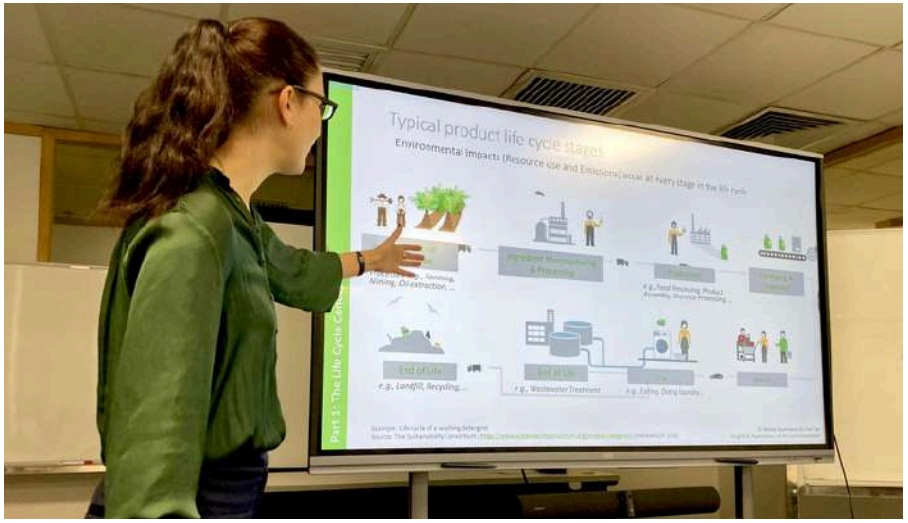
TEACHING AND LEARNING

Life Cycle Lab Development

Since its launch, the HKUST Life Cycle Lab (LCL) has significantly progressed toward its vision. The LCL website serves as a comprehensive resource hub, offering policies and guidelines for practitioners, contractors, and suppliers, as well as valuable insights for students and academics interested in life cycle thinking. Additionally, the University engage its audience through an e-Newsletter, which showcases content related to Life Cycle Thinking in Hong Kong and features profiles of individuals, organizations, and movements driving progress in this field. HKUST also encourages thought-provoking discussions by presenting alternative perspectives through commentaries that challenge existing ideas and assumptions.

Key events included:

- Collaborative partnerships between academia and industry – HKUST conducting a Life Cycle Assessment (LCA) report for Greenpeace Hong Kong on their Reusable Cup Systems. This collaboration not only provided valuable insights into the environmental impact of such systems but also strengthened the bond between academia and a prominent environmental organization.
- The HKUST Life Cycle Lab hosted a course about Life Cycle Assessment (LCA) together with the Business Environment Council. They shared practical insights on how to conduct LCA, the potential benefits and pitfalls and dived into a number of applications for attendees came from different industries.
- "Milk Co: The Life Cycle Challenge" boardgame, co-developed by HKUST and Blackbody Lab. This boardgame provides a powerful tool to visualize and comprehend intricate life cycle processes, engaging students to identify opportunities for reducing environmental impacts throughout the product life cycle.



TEACHING AND LEARNING

Sustainable Design Thinking Certificate Program 2024

Organized by HKUST Sustainability, the Vice-President (Teaching & Learning) Office (HKUST (GZ)), and the Academy of Interdisciplinary Studies, the workshop brought together a diverse group of 22 undergraduates and postgraduates from both campuses. During the week, participants engaged in a series of workshops and team activities—brainstorming, field surveys, and prototyping sessions—led by skilled academic faculty, HKUST operation and counseling center staff, and external industry professionals. The program received generous support from The Tung Foundation under the HKUST2.0 framework, aimed at truly integrating HKUST (Clear Water Bay) and HKUST (Guangzhou).

The program was intense and fruitful. Students teamed up with peers from diverse backgrounds and used design thinking to develop innovative solutions for real-world sustainability problems on campus. The collision of different backgrounds and experiences sparked new ideas and fostered deeper connections through shared laughter.

The winning team, Polarbrella, proposed a net-zero umbrella with a cooling system and charging function to be attached to outdoor sitting areas. The first runner-up project, USTMood, focused on the health and well-being of HKUST students, taking the form of a digital mood tracking system aimed at being the voice of students silently seeking help. SSCoin, an initiative to differentiate between recyclables and non-recyclables using a scanning system, came third in the contest. The Best Prototype Award went to One Punch, which impressed the judges by making recycling fun while addressing both well-being and education in waste management.

By empowering students as partners in eco-innovation, HKUST is laying the groundwork for a more resilient and circular campus community. This tradition of cross-campus engagement and learning will continue next year in Guangzhou.

TEACHING AND LEARNING

HKUST x HKSTP Co-Ideation Program

The HKUST x HKSTP Co-Ideation Program is an entrepreneurship supporting program collaborated between the Hong Kong Science and Technology Parks Corporation (HKSTP) and the Hong Kong University of Science and Technology (HKUST), aiming to jumpstart students' entrepreneurial journeys by helping them cultivate their business ideas. Through the program, startups receive financial support, training and a streamlined path to HKSTP's Incubation program.

The program offers seed funding up to $100,000 in financial grants, coaching from HKUST advisors and connections to the Mentorship Network, training in topics such as Hong Kong's startup ecosystem, Business modelling, Pitching and investment, and preparing for potential HKSTP incubation admission.

$100K maximum provided seed funding in financial grants

Corporate Social Responsibility Thailand Field Study

The students from BSc in Environmental Management and Technology Program (EVMT) and MSc in Environmental Science and Management Program embarked on a captivating field trip entitled "Sustainable Community Development for Green Community Management and Technologies" to Chiang Mai, Thailand.

The students had a unique opportunity to engage with various local community groups and gain insight into their needs. They also discovered the positive impacts that the Asian Development College for Community Economy and Technology and Chiang Mai Rajabhat University are making in improving community livelihoods through their innovative environmental integrative and conservation approaches.

Through this immensely valuable experience, the students also learned about the significance of connecting businesses and corporations with communities through Corporate Social Responsibility (CSR) initiatives. This has allowed them to understand the sustainable development from a cross-disciplinary perspective.

TEACHING AND LEARNING

Future Ecopreneur Program

Powered by Hang Seng Bank and co-organised by HKSTP and Wofoo Social Enterprises, the Future Ecopreneur Program aims to foster innovation and entrepreneurship within the Green Technology and Sustainable Development sectors in Hong Kong. By participating, students gain invaluable knowledge, skills, and resources to develop their green-tech projects and drive environmental change.

Program highlights include the Ecopreneurship Bootcamp, Sustainability Masterclasses, Seed Funds, and International Exposure.

The Future Ecopreneur Programme focuses on four key themes in green technology: Green & Sustainability Buildings and Infrastructures, Big Data & Data Analytics for Sustainability, New Energy and Energy Efficiency, and Green & Smart-city Solutions & Services.

Climate, Weather and Water Forum 2024

Supported by different government departments and organized by the University. Climate, Weather and Water Forum (CWWF) has invited more than 20 speakers and scientists to focus on the interconnected realms of climate, weather, and water, bringing together experts from around the world to address emerging threats from the changing climate and extreme weather, water scarcity, and the urgent need for sustainable adaptation strategies. The forum provides a platform for academia, industry, and government to engage in dialogue, collaboration, and action towards a more sustainable and resilient future.

TEACHING AND LEARNING

International Leadership Forum: Collaboration for a Sustainable Future

The Hong Kong University of Science and Technology (HKUST) hosted the International Leadership Forum on November 8, 2023. The forum convened over 50 leading figures and academics from 22 universities across 15 Asian economies. The forum sparked insightful discussions on two pivotal topics: "Global Synergy: The Role of University Collaboration in Sharing Data for SDGs" and "Measuring Impact: Assessing Universities' Sustainability Initiatives." Panelists included a global line-up of professors from universities all over the world.

HKUST emphasized the University's dedication to engaging stakeholders across the spectrum to collaborate and foster novel ideas and practices to work collectively towards a sustainable world. Through open communication and knowledge sharing, the University is actively forming new partnerships through collaborative research projects and joint programs to nurture future global leaders.

50 leading figures and academics from

22 universities participated

TEACHING AND LEARNING

One-Earth Summit 2024

The Hong Kong University of Science and Technology (HKUST) played a pivotal role in the inaugural One Earth Summit, held on March 25, 2024, at the Regala Skycity Hotel in Hong Kong. This landmark event brought together over 1,000 influential leaders and changemakers from various sectors to engage in action-focused dialogues aimed at achieving a net-zero, nature-positive transition for the world.

1,000 influential leaders and changemakers from various sectors engaged.

An HKUST representative had the honor of participating in a panel discussion on the future of sustainable technology. During the session, the University representative shared valuable insights on HKUST's initiatives to drive innovation and entrepreneurship, fostering scientific breakthroughs and accelerating the adoption of transformative technologies in climate and nature conservation.

The One Earth Summit, organized by the Institute of Sustainability and Technology and co-organized by the World Economic Forum's GAEA (Giving to Amplify Earth Action) Initiative, served as a unique platform for cross-sectoral dialogue involving government representatives, NGOs, industry leaders, and academia. This collaborative approach aligns closely with the United Nations Sustainable Development Goals (SDGs), emphasizing the importance of partnerships in addressing global challenges.

HKUST's commitment to sustainability was highlighted through a statement: "As a leading technology university, HKUST is fully committed to cultivating a vibrant culture of innovation and collaboration. We believe in utilizing education and research discoveries as powerful catalysts for positive change and a sustainable future."

The summit focused on five key areas crucial to sustainable development: Water and Nature-based Solutions; Infrastructure and Urban Development; Food and Agriculture; Energy Transition; and Materials and Industrial Decarbonization. These themes align closely with several SDGs, including Clean Water and Sanitation (SDG 6), Sustainable Cities and Communities (SDG 11), Zero Hunger (SDG 2), Affordable and Clean Energy (SDG 7), and Responsible Consumption and Production (SDG 12).

HKUST's participation in the One Earth Summit demonstrates its commitment to addressing global sustainability challenges through collaboration. By engaging with diverse stakeholders, HKUST contributes to innovative solutions and partnerships that advance the SDGs.

RESEARCH AND DEMONSTRATION

Sustainable Smart Campus as a Living Lab Initiative

Started with a HK$50 million University grant, the Sustainable Smart Campus as a Living Lab (SSC) program has sparked 41 homegrown projects, supported 20+ seed projects, involved over 850 students, 250 faculty members and 650 outside visitors over the last five years. A few start-ups were incubated through the initiative and a number of projects were recognized with international prizes, bringing substantial visibility to the University. Recently at the Global Sustainability Congress, HKUST took the lead to sign a joint declaration with 14 other universities from all over the world to promote carbon neutrality with the living lab approach, epitomizing the University's sustainability leadership.

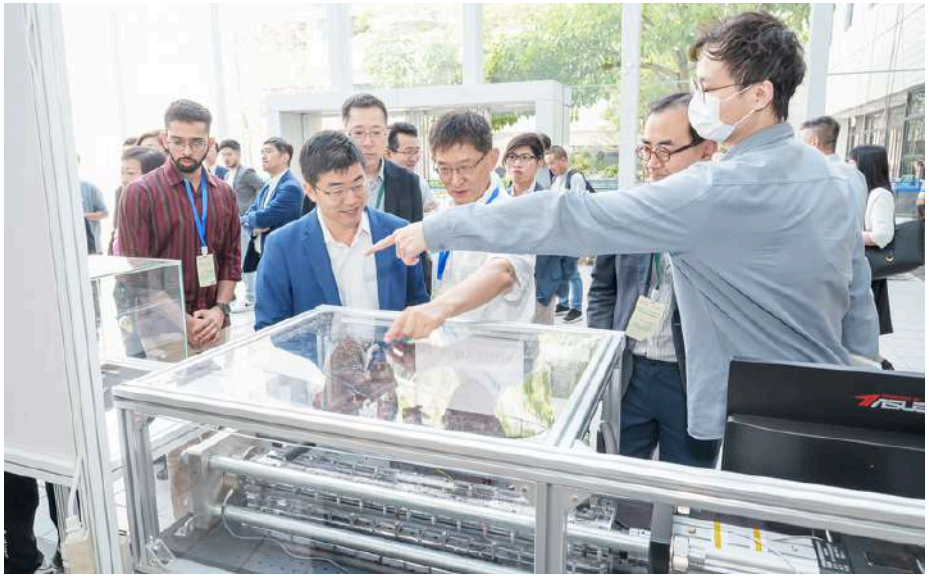
Key Achievements in 2023-2024

6 Recently approved projects

4M total funding for new projects in 2023/24

Other Achievements

- Honorary Member Award in 2022 International Sustainable Campus Network (ISCN) Excellence Award
- 504 Visitors from the Industry (Jockey Club, Great Eagle Group, Buro Happold, Sun Wah group, British Chamber of Commerce), Government Sector (Education Bureau, University Grants Committee), Academia (Institute of Sustainability and Technology, Tseung Kwan O Government Secondary School, Taylor's University, Shantou University, Asian Universities Alliance).
- Collaboration with 39 HKUST departments/schools on ceremonies, seminars, conferences, Christmas Show, message wall, campaigns and calls for action held at the SSC Hub.



RESEARCH AND DEMONSTRATION

Sustainable Smart Campus as a Living Lab Initiative

Aligned with the HKUST 2028 Sustainability Challenge, the Sustainable Smart Campus as a Living Lab (SSC) targets on its five key focuses — energy and greenhouse gas emissions (GHG), water, waste to the landfill, landscape and biodiversity, community well-being, to drive down carbon emission and promote wellness on campus.

(a) Number of recently approved projects

Projects Name	Addressed SDGs
Interactive UST map + Amazing Sustainability Race: Art-Tech for a better interactive Sustainable HKUST Campus	
Smart Building Façade Inspection with Thermographic Images Using Unmanned Aerial Vehicles (UAVs)	
Green Parking with Edge AI Camera for Carpoolers and Electric Vehicle Drivers	
Sustainable Smart Marine Grid (SSMG) - Solar-powered base stations for continuous underwater surveying and trash cleaning	
Developing a Fully Automatic Photobioreactor System for Algae-based Carbon Capture solution	
Black Soldier Fly Bin – the natural decarbonize solution to upcycle food waste into organic fertilizer to promote the circular food system	

RESEARCH AND DEMONSTRATION

Sustainable Smart Campus (SSC) Award-winning Projects in Geneva International Exhibition of Inventions 2024

SSC innovation has expanded its impact to the global community. Three SSC projects made remarkable achievements at the 49th Geneva International Exhibition of Inventions 2024.

- Eco-brick by the CIVL Department
- Advanced photovoltaic smart window for thermal insulation by the ISD Department won the Gold Medal with Congratulations of the Jury
- Self-cleaning nanocoating project by the MAE Department won the Gold Medal.

To further enhance the connection between the University research community and industry for greater impact, the University have been connecting start-ups from outside campus to partner with HKUST faculty to advance cutting-edge innovation on the campus to support frontier research and knowledge transfer.

Recently awarded projects with start-ups collaboration:

- A novel, smart and cost-effective parking system to incentivize carpooling and enhance the utilization of EV charging stations in the campus with edge AI technologies
- A solar-powered base station for continuous underwater surveying and trash cleaning
- A fully automatic photobioreactor system for algae-based carbon capture solution

RESEARCH AND DEMONSTRATION

Research Highlights

Joint Laboratory by HKUST and King's Flair to Strengthen Innovative Research on Sustainable Technologies

The Hong Kong University of Science and Technology (HKUST) and King's Flair Development Limited (KF) celebrated the inauguration of the "HKUST-KF Joint Laboratory for Sustainable Technologies" (Lab) today. With the launch of the Lab, HKUST and KF will collaborate to explore frontier research and applications in the areas of sustainable technologies and materials, carbon reduction and re-industrialization.

The joint effort aims to develop innovative technologies that promote sustainable living environments and address the increasingly severe environmental issues caused by climate change, in support of Hong Kong's carbon neutrality and national dual-carbon goals.

Enhancing the Performance of Eco-Friendly Cooling Applications

As demand for effective cooling solutions continues to grow due to rising global temperatures, scientists worldwide are actively exploring energy-saving cooling technologies. Unlike active cooling, which relies entirely on energy consumption to operate, passive cooling utilizes natural processes and design principles to reduce heat and maintain a comfortable temperature with little to no energy consumption. This eco-friendly approach has generated significant interest among researchers due to its sustainable and zero-electricity characteristics.

Researchers at the School of Engineering of the Hong Kong University of Science and Technology (HKUST) have developed a sustainable and controllable strategy to manipulate interfacial heat transfer, paving the way for improved performance of eco-friendly cooling in various applications, including electronics, buildings, and solar panels.

In their pioneering work, the research team, led by the Department of Mechanical and Aerospace Engineering at HKUST, introduced a sustainable strategy to manipulate interfacial heat transfer between the contacted substrate and typical metal-organic frameworks (MOFs) by utilizing a water adsorption process.

RESEARCH AND DEMONSTRATION

Research Highlights

JC STEM Lab launched in Climate Change

The Hong Kong University of Science and Technology (HKUST) has received a generous donation of HK$30 million from The Hong Kong Jockey Club Charities Trust to establish three Jockey Club STEM Labs. Led by three HKUST Global STEM Professors, these labs are dedicated to advancing knowledge in the fields of data science, regenerative biology, and climate change.

The JC STEM Lab of Convection and Precipitation aims to enhance understanding and predictive capabilities of extreme precipitation. By conducting data analysis and model simulations, the lab will improve model representation of convection and precipitation processes, enabling more accurate precipitation predictions to aid decision-makers in responding to extreme weather. This initiative contributes to socioeconomic development in Hong Kong and surrounding regions.

30M **HKD donation from The Hong Kong Jockey Club Charities Trust for establishing three Jockey Club STEM Labs**

First Model to Segment and Generalize Coral Reef Image

Coral is one of the key indicators of marine research due to coral's rich biodiversity and sensitivity to small environmental changes. However, segmenting coral is no easy task due to its irregular boundaries and degraded water quality. Therefore, underwater coral visual understanding has gained increasing attention within the computer vision community. An HKUST-led research team introduced CoralSCOP, the first foundation model that can segment dense coral reef automatically and has strong generalization ability to project the full image of coral reef. The model also offers user-defined tuning and sparse-to-dense conversion for precise coral statistics. To maximize its usage, the team also incorporated mask-referring segmentation and instruction-following segmentation so that both amateurs and advanced researchers could master the model.

The research paper has been accepted at one of the top-tier conferences - IEEE/CFV Computer Vision and Pattern Recognition 2024. The research team presents the first foundation model for coral image segmentation and has hopes to turn it into a new standard tool for coral visual research.

RESEARCH AND DEMONSTRATION

Research Highlights

Prediction of Hot Nights

In recent years, Hong Kong has experienced a series of extreme weather events. In July 2022, the scorching heat broke 11 records, while in 2023, the city experienced hourly rainfall of 158.1mm, the highest since records began in 1884. An inter-university research team by The Hong Kong University of Science and Technology (HKUST), The Chinese University of Hong Kong (CUHK), and the University of Hong Kong (HKU) conducted a study on extreme weather events and their impacts on the built environment in Hong Kong, aiming to assess the trends and effects of extreme weather events under the influence of global climate change.

The cross-university research team combined a mesoscale Weather Research and Forecasting (WRF) Model with local urban environmental data to estimate the average number of hot nights in Hong Kong from the past decade to the 2040s. The finding predicts a 50% increase in hot nights and over 40% rise in extreme rainfall in Hong Kong by the 2040s.

MATERIALITY

The University communicates with stakeholders and solicits their feedback to understand how it affect them, the topics that matter most to them, and how we can best cooperate. It has engaged the stakeholders periodically to understand their concerns.

This year, the University adopted a double materiality approach to assess sustainability risks systematically. This decision demonstrates that HKUST recognizes its significant economic influence and acknowledges that various organizations view higher education institutions as role models. The University takes this responsibility seriously.

METHODOLOGY

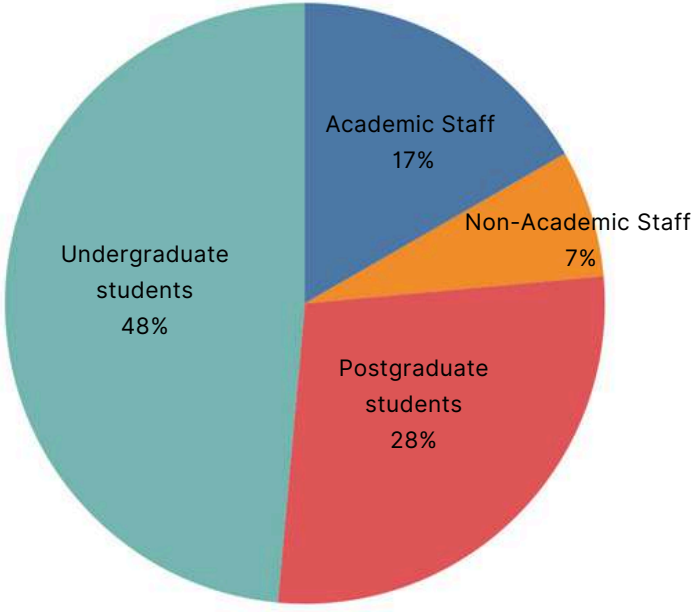
HKUST has been conducting the materiality assessment since the 2019-20 academic year to identify key topics relevant to its sustainable development. This process also guides resource allocation and enhances stakeholder communication and engagement. Starting this year, HKUST has also adopted the double materiality concept to align with the latest sustainability disclosure standards and enhance the understanding of the relationship between the University and these topics.

More than 1,000 members of the HKUST community, including University Administration Committee (UAC) members, faculty, staff, and students, have been invited to participate in a Sustainability Impact Survey. All participants reviewed 16 sustainable development topics. UAC members assessed how these topics impact HKUST, while other members evaluated how the University's operations affect these topics.

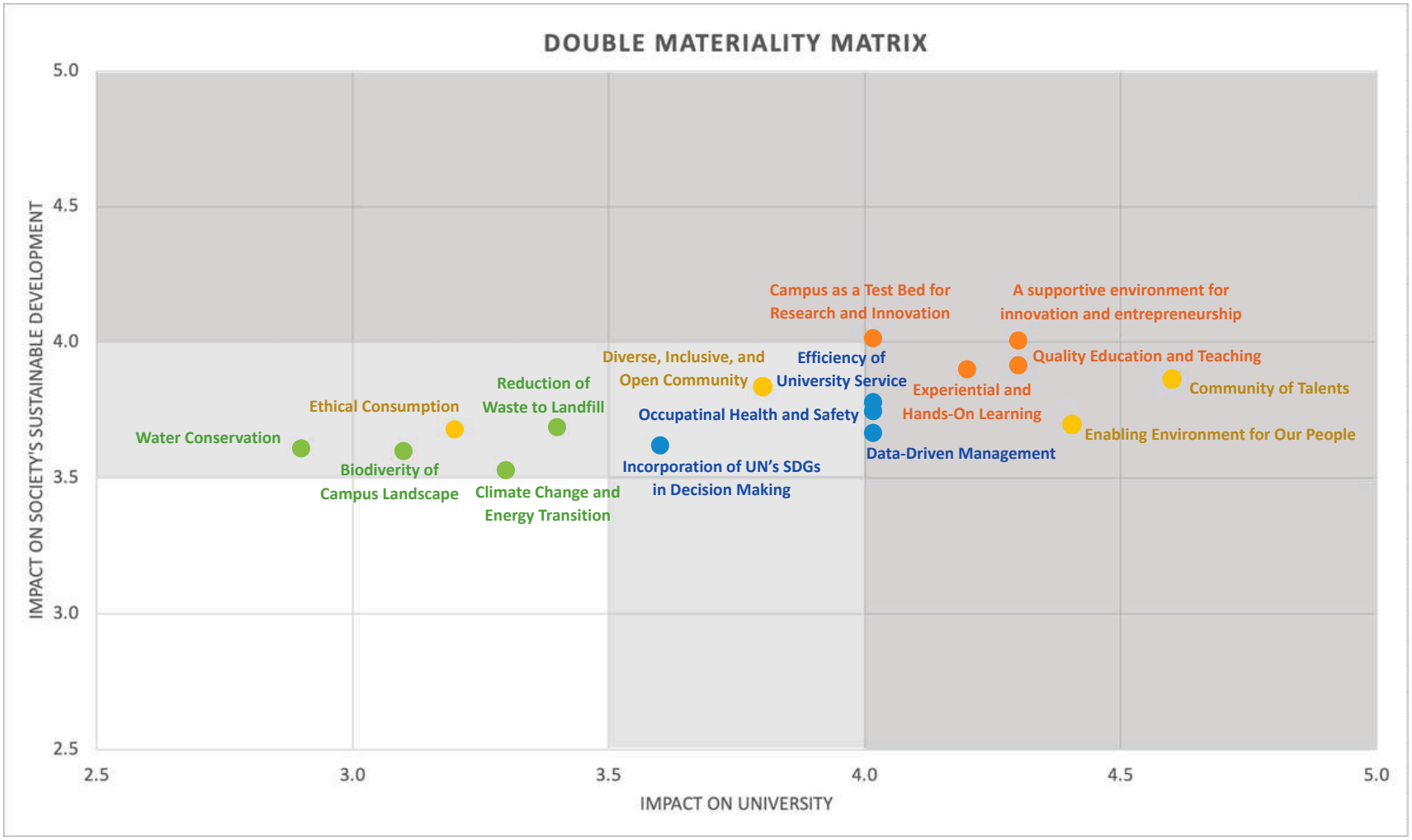
The survey ratings are then converted into scores ranging from one to five and compiled into a materiality matrix. In this matrix, the y-axis represents the perceived impact of HKUST's operations on the topics, while the x-axis indicates the perceived impact of the topics on the university. The darker gray box signifies topics of "high materiality," the lighter gray box represents "medium materiality," and the white area indicates "lower materiality."

The results showed that talent acquisition and growth, research and innovation, and quality experiential learning are the most important topics for the University. Among these, research and innovation are seen as having the greatest impact on society's sustainable development. However, respondents believe that environmental issues have a low impact on the University, and the University also has a limited effect on society's sustainable development in this area.

Respondents Breakdown
(Impact on Society's Sustainable Development



MATERIALITY MATRIX



Legend

Environmental | Social | Governance | Education

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Climate change and energy transition	Reducing greenhouse gas emissions through energy efficiency improvements and the adoption of renewable energy sources.	Rising energy costs place a significant strain on HKUST's operational budget, directly increasing expenses and limiting financial flexibility. The potential introduction of carbon taxes would also lead to additional costs due to the reliance on non-renewable energy. Furthermore, the effects of extreme weather could undermine the University's operation capacity.	HKUST's commitment to implement innovative energy solutions and promote best practices reduces Greenhouse gases emissions, contributing to Hong Kong's Carbon Neutrality 2050 goals. The research on renewables expand renewable energy opportunities for the society. The behavior campaigns on campus impacted the future generation of their energy consumption behavior.	7 AFFORDABLE AND CLEAN ENERGY; 3 GOOD HEALTH AND WELL-BEING
Water conservation	Focusing on efficient water use, including initiatives to minimize unnecessary water wastage across facilities.	Rising water costs will place additional financial burdens on the university. Also, disruptions in water supply could significantly hinder campus operations, research projects, and the overall quality of campus life. Water pollution would increase water purification costs and pose health risks to the campus community.	HKUST's dedication to water conservation establishes a leading example of sustainable practices within the Hong Kong community. Through initiatives like the grey water recycling projects, irrigation reduction infrastructure, and water-efficient shower heads and tap fittings.	6 CLEAN WATER AND SANITATION

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Reduction of waste to landfill	Reducing waste sent to landfills through recycling, composting, and waste minimization strategies.	The increasing costs associated with waste management and cleaning directly affect HKUST's operational budget. Without effective waste reduction and diversion strategies, HKUST also risks higher expenses upon the implementation of the Municipal Solid Waste (MSW) charging scheme. Failure to adapt to the regulation of non-sustainable product use ban could result in non-compliance penalties and reputational harm.	HKUST is committed to reducing waste sent to landfills and promoting a circular economy by developing an on-campus composting program for biodegradable materials, reducing packaging materials, and launching recycling campaigns.	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Biodiversity of campus landscape	Protecting and enhancing biodiversity, supporting the variety of animal and plant species to maintain ecological balance and environmental health.	Biodiversity loss increased the risk of reduced science research opportunities. It increases the reputational risk associated with losing natural assets as a means to attract talent. Furthermore, failure to comply with stricter biodiversity replacement regulations for new developments could lead to legal and financial repercussions, delaying projects and increasing overall costs.	HKUST's biodiversity initiatives contribute to regional efforts to combat biodiversity loss. The University focused on improving soil content and reduce chemical fertilizers, and creating biodiversity zones to create inventories for bio-activity.	15 LIFE ON LAND

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Enabling environment for our people	Creating a supportive environment for the community by prioritizing well-being, fostering work-life balance, and promoting professional development.	A supportive environment that prioritizes mental health and well-being significantly enhances the overall satisfaction of students and staff. By living in an enabling environment that removing the hindrance to innovation and research, HKUST community is able to focus, experiment, and think creatively. Moreover, a lack of such environment can result in high turnover rates among students, faculty, and staff, disrupting the continuity in academic and research endeavors, impacting the university's reputation and long-term goals.	HKUST's commitment to a supportive and inclusive environment by providing stress reduction activities, evaluation framework for assessing community well-being, air quality monitoring, and other indictaors	3 GOOD HEALTH AND WELL-BEING
Community of Talents	Attracting diverse and talented individuals by cultivating a vibrant community and fostering a collaborative culture that supports innovation, learning, and growth.	A vibrant and collaborative community of talents directly enhances HKUST's ability to attract top-tier students, faculty, and staff from diverse backgrounds. A strong talent pool is also very crucial for driving HKUST's strategic initiatives, including fostering innovation ecosystems and entrepreneurial ventures.	HKUST's commitment to developing and retaining talent contributes to Hong Kong's workforce quality and supporting the Hong Kong's long-term economic and innovation goals. Graduates and staff from HKUST bring their skills and knowledge to a wide array of industries, helping to drive sustainable development and foster competitiveness in the local and global economy.	17 PARTNERSHIPS FOR THE GOALS

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Diverse, inclusive, and open community	Embedding Diversity, Equity, Inclusion, and Belonging into the community, creating a welcoming environment that respects and values all individuals.	Failure to adhere to anti-discrimination ordinances could lead to legal penalties, reputational damage, and reduced trust among stakeholders. A diverse and inclusive environment enriches HKUST's academic ecosystem by incorporating a wider range of perspectives into its research and teaching. Also, the increasingly openness with Mainland China will facilitate joint research projects, student exchanges, and cross-border initiatives.	HKUST's efforts to foster a diverse and inclusive community contribute to building a fairer and more equitable society in Hong Kong. By championing inclusivity, HKUST provides an example of how institutions can create welcoming environments.	10 REDUCED INEQUALITIES
Ethical consumption	Incorporating socio-economic and environmental considerations into procurement process, ensuring the support for sustainable and ethical consumption throughout the supply chain.	Modern slavery practices and exploited labors represent a significant reputational and compliance risk. Without proper due diligence to our contractors and suppliers could lead to HKUST's reputational damage, diminished trust from stakeholders, and potential financial repercussions from associations with unethical procurement practices.	HKUST's commitment to ethical consumption influences suppliers and vendors to adopt fair and sustainable practices, to improve the labor standards across the supply chain. HKUST also helps shape responsible consumer behaviors in Hong Kong by fostering a culture of accountability and social responsibility.	12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Data-driven management	Using relevant and verifiable data for decision-making to ensure transparency, accuracy, and data privacy, including regular performance reviews of suppliers and public disclosure of financial and operational metrics.	A data driven-management could lead to greater transparency for evaluating use of University resources allocation for public and UGC accountability requirements. Any failure to meet these requirements could lead to potential funding limitations. Moreover, regulations are increasingly mandating transparent and accurate disclosure of Environmental, Social, and Governance (ESG) data. Non-compliance or inaccurate reporting could result in reputational damage, financial penalties, and loss of stakeholder confidence.	HKUST's data-driven approach strengthens its credibility and transparency, influencing industry standards and building trust with stakeholders.	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Incorporation of UN's SDGs in decision making	Integrating the United Nations' 17 Sustainable Development Goals into decision-making processes to align strategies with global sustainability and social responsibility efforts.	The SDGs provide HKUST with a clear and internationally recognized framework to guide sustainability efforts across operations, academics, and community engagement. Integrating the UN's Sustainable Development Goals (SDGs) into decision-making enhances HKUST's standing in the Times Higher Education (THE) Impact Rankings. Also, incorporating the SDGs helps HKUST to collaborate with local and international organizations, such as SDSN Hong Kong.	HKUST promotes the UN SDGs through a combination of leadership and practical actions. The university demonstrates measurable progress, reinforcing its position in global rankings such as the Times Higher Education Impact Rankings. Also, HKUST actively shares research findings and best practices, advocating for evidence-based solutions to global challenges.	17 PARTNERSHIPS FOR THE GOALS

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Occupational health and safety	Committing to top-tier safety and health principles across all operations and activities, including occupational health programs and safety training.	The number and severity of workplace injuries will increase the disruptions to operations, academic schedules, and research activities. Failure to comply safety standards and regulations can lead to fines and lawsuits. Unsafe practices could also lead to costly property damage, and harm HKUST's reputation as a leading academic institution.	HKUST's commitment to health and safety contributes to promoting the best practices. By sharing its initiatives and fostering awareness, the university helps encourage a culture of care and responsibility in Hong Kong. These efforts support the broader goal of building a safer and healthier community.	3 GOOD HEALTH AND WELL-BEING
Efficiency of university service	Enhancing and innovating services to positively impact stakeholders, including improvements in digital services like medical clinic reservations, IT support, and counseling resources.	Expectations are set to optimize the use of public funding for maximum outcomes, requiring HKUST to allocate fund effectively for university services. Also, as universities compete globally for talent and resources, maintaining service standards that are on par with or exceed those of competitors is critical.	HKUST's commitment to service efficiency directly addresses concerns about the potential waste of public funds by ensuring that resources are used effectively and transparently. The university demonstrates accountability in utilizing public funding, setting an example for responsible financial management in Hong Kong's education sector.	8 DECENT WORK AND ECONOMIC GROWTH

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
Quality education and teaching	Facilitating an inclusive, innovative, and high-quality educational environment that fosters meaningful learning experiences and promotes diversity and respect.	Cutting-edge educational technologies and innovative teaching methods helps HKUST sets itself apart as a leader in quality education. Also, the global university rankings provide HKUST with a clear and internationally recognized framework to quantify its sustainability efforts and compare with peers. Moreover, a larger and more diverse student body can enrich the campus environment with a variety of perspectives and experiences.	HKUST's commitment to quality education supports the development of a skilled, capable workforce. Graduates are capable to bring diverse skills with innovation and creativity to the society.	4 QUALITY EDUCATION
Experiential and hands-on learning	Focusing on interactive, hands-on learning experiences that build practical skills and create memorable educational outcomes through extracurricular activities, experiments, student societies, and competitions.	Workplaces require students to equip with practical skills that align with evolving societal and industry demands. Failure to deliver industry-relevant skills could reduce graduate's competitiveness in job market, including lower starting salaries and employment rate.	HKUST's focus on experiential learning produces graduates who are job-ready and adaptable. These efforts contribute to a skilled workforce that supports the city's economic growth and innovation.	4 QUALITY EDUCATION

Environment | Social | Governance | Education

Material Issues	Description	Impact Inwards	Impact Outwards	Relevance to SDGs
A supportive environment for innovation and entrepreneurship	Fostering a supportive environment that encourages innovation and entrepreneurship, providing resources such as mentorship, funding opportunities, and incubators to empower students and faculty in pursuing new ideas and ventures.	Hong Kong's position as an innovation and technology hub, this enhanced reputation attracts top-tier students, researchers, and faculty from around the globe for HKUST. A robust entrepreneurship ecosystem helps HKUST remains competitive in producing high-quality research, patents, and successful start-ups.	HKUST's commitment to entrepreneurship strengthens Hong Kong's position as an innovation and technology hub. This approach enhances the university's ability to compete externally in the number and quality of innovations, patents, and start-ups. Moreover, graduates equipped with entrepreneurial skills contribute to the local economy, creating businesses, jobs, and solutions that address societal challenges, further reinforcing HKUST's reputation as a leader in innovation.	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Campus as a test bed for research and innovation	Transforming HKUST's campus into a platform for learning, experimentation, and showcasing innovative ideas, driving sustainable outcomes through applied research and real-world solutions.	Accelerating of the translation of research into practical applications enables HKUST to rapidly prototype, test, and refine innovative ideas. Transforming the campus into a test bed allows HKUST to showcase sustainability research through visible demonstrations, and provide a platform to pilot transformative innovations in sustainable campus operations.	HKUST's test bed initiatives contribute to industry and community advancements by generating practical, scalable solutions. These projects also strengthen HKUST's role in regional innovation and inspires other institutions and sectors to adopt similar approaches. These efforts support's transformation into a hub for sustainable development and innovation.	17 PARTNERSHIPS FOR THE GOALS

ESG FRAMEWORKS

This report had been prepared in accordance with the Future Fit Business Benchmark, United Nation's Sustainable Development Goals (SDGs) and Global Reporting Initiative (GRI) Standards.

Adopting the Future Fit Business Benchmark enables a more forward thinking approach for HKUST, helping to shift the focus away from today's best practice towards tomorrow's required practice. SDGs offer better alignment to university rankings. GRI Standards is commonly adopted among Hong Kong corporations, and some overseas universities.

ALIGNMENT WITH FUTURE FIT BUSINESS BENCHMARK (FFBB)

To facilitate reporting in accordance with FFBB, a cross-referencing exercise has been conducted to identify how the current reporting aligns with the 23 breakeven goals under FFBB.

Table XX (Alignment with Future Fit Business Benchmark)

Theme	Recommended Disclosures	Relevance to the Reporting Scope	Relevance to Environment, Social or Governance	Page
Energy	Energy is from renewable sources	Yes	Environment	15
Water	Water use is environmentally responsible and socially equitable	Yes	Environment	24
Natural Resources	Natural resources are managed to respect the welfare of ecosystems, people, and animals	Yes	Environment	28
Pollution	Operational emissions do not harm people or the environment	Yes	Environment	57
	Operations emit no greenhouse gases	Yes	Environment	13
	Products do not harm people or the environment	No	Environment	/
	Products emit no greenhouse gases	No	Environment	/
Waste	Operational waste is eliminated	Yes	Environment	34
	Products can be repurposed	No	Environment	/
Physical Presence	Operations do not encroach on ecosystems or communities	Yes	Environment	28

ALIGNMENT WITH FUTURE FIT BUSINESS BENCHMARK (FFBB)

To facilitate reporting in accordance with FFBB, a cross-referencing exercise has been conducted to identify how the current reporting aligns with the 23 breakeven goals under FFBB.

Table XX (Alignment with Future Fit Business Benchmark)

Theme	Recommended Disclosures	Relevance to the Reporting Scope	Relevance to Environment, Social or Governance	Page
People	Community health is safeguarded	Yes	Social	54-60
	Employee health is safeguarded	Yes	Social	54
	Employees are paid at least a living wage	Yes	Social	74
	Employees are subject to fair employment terms	Yes	Social	74
	Employees are not subject to discrimination	Yes	Social	49
	Employee concerns are actively solicited, impartially judged, and transparently addressed	Yes	Social	74
	Product communications are honest, ethical, and promote responsible use	No	Social	/
	Product concerns are actively solicited, impartially judged, and transparently addressed	No	Social	/
Drivers	Procurement safeguards the pursuit of future-fitness	Yes	Governance	73
	Financial assets safeguard the pursuit of future-fitness	Yes	Governance	73
	The right tax is paid in the right place at the right time	No	Governance	/
	Lobbying and advocacy safeguard the pursuit of future-fitness	No	Governance	/
	Business is conducted ethically	Yes	Governance	73

ALIGNMENT WITH UN SDGS

HKUST is striving to make a meaningful contribution to addressing the UN's 17 Sustainable Development Goals (SDGs) through its operation, research, education, development of next generation leaders, and community engagement. Many of the initiatives and actions contained in this report are in alignment with addressing the SDGs.

Table XX (Alignment with SDGs)

SDG		Details	Section	Page
1	**No Poverty**	End poverty in all its forms everywhere	Social	52-53, 74
2	**Zero Hunger**	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Environment, Social	33, 57
3	**Good Health and Well-being**	Ensure healthy lives and promote well-being for all at all ages	Social	55-57
4	**Quality Education**	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Social	62
5	**Gender Equality**	Achieve gender equality and empower all women and girls	Social	49
6	**Clean Water and Sanitation**	Ensure availability and sustainable management of water and sanitation for all	Social	57
7	**Affordable and Clean Energy**	Ensure access to affordable, reliable, sustainable and modern energy for all	Environment	15
8	**Decent Work and Economic Growth**	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Social	53, 74
9	**Industry, Innovation and Infrastructure**	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Education	21-23
10	**Reduced Inequalities**	Reduce inequality within and among countries	/	/

ALIGNMENT WITH UN SDGS

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Table XX (Alignment with SDGs)

SDG		Details	Section	Page
11	Sustainable Cities and Communities	Make cities and human settlements inclusive, safe, resilient and sustainable	/	/
12	Responsible Consumption and Production	Ensure sustainable consumption and production patterns	Energy & GHG	13
			Water	24
			Waste	34
13	Climate Action	Take urgent action to combat climate change and its impacts	Energy & GHG	2-4
14	Life Below Water	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Landscape & Biodiversity	
15	Life on Land	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Landscape & Biodiversity	31-32, 72
16	Peace, Justice and Strong Institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Social	47-51
17	Partnerships for the Goals	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Governance	73

ALIGNMENT WITH GRI

This report has been prepared by referencing the GRI Standards: Core Option. It discloses our performance against some of the selected issues that are considered most materials to our stakeholders.

Table XX (Alignment with GRI Goals)

GRI Standards	Reporting Requirement		Section	Page
GRI 2: General Disclosures	2-1	Organizational Details	Cover page	Cover page
	2-3	Reporting Period, Frequency and Contact Point	Last page	Last page
	2-23	Policy Commitments	Overview, Governance	2-4, 71-77
	2-24	Embedding Policy Commitments	Governance	72-74
	2-26	Mechanisms for Seeking Advice and Raising Concerns	Governance	74
	2-28	Membership Associations	Governance	73, 76
	2-29	Approach to Stakeholder Engagement	Materiality	105
GRI 3: Material Topics	3-1	Process to Determine Material Topics	Materiality	105-114
	3-2	List of Material Topics	Materiality	106-114

ALIGNMENT WITH GRI

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Table XX (Alignment with GRI Goals)

GRI Standards	Reporting Requirement		Section	Page
GRI 302: Energy	3-3	Management of Material Topics	Energy & GHG	13
	302-1	Energy Consumption within the Organization	Energy & GHG	13
	302-4	Reduction of Energy Consumption	Energy & GHG	13
GRI 303: Water	3-3	Management of Material Topics	Water	24
	303-5	Water Consumption	Water	24
GRI 305: Emissions	3-3	Management of Material Topics	Energy & GHG	13
	305-1	Direct (Scope 1) GHG Emissions	Energy & GHG	13
	305-2	Energy Indirect (Scope 2) GHG Emissions	Energy & GHG	13
	305-3	Other Indirect (Scope 3) GHG Emissions	Energy & GHG	13
	305-4	GHG Emissions Intensity	Energy & GHG	13
	305-5	Reduction of GHG Emissions	Energy & GHG	13

ALIGNMENT WITH GRI

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Table XX (Alignment with GRI Goals)

GRI Standards	Reporting Requirement		Section	Page
GRI 306: Waste	3-3	Management of Material Topics	Waste to the Landfill	34
	306-2	Management of Significant Waste-related Impacts	Waste to the Landfill	34
	306-3	Waste Generated	Waste to the Landfill	34
	306-4	Waste Diverted from Disposal	Waste to the Landfill	34
	306-5	Waste Diverted to Disposal	Waste to the Landfill	34
GRI 403: Occupational Health and Safety	3-3	Management of material topics	Social	54
	403-3	Occupational Health Services	Social	54
GRI 406: Non-discrimination	3-3	Management of material topics	Social	49

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