



香港科技大學

THE HONG KONG UNIVERSITY OF  
SCIENCE AND TECHNOLOGY

# HKUST 2020 Sustainability Challenge

————— ACTION PLAN 2015-2020 —————



# SUSTAINABILITY VISION

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



# HKUST 2020 SUSTAINABILITY CHALLENGE

The long term vision will be initially implemented through a five-year plan, the HKUST 2020 Sustainability Challenge. The Plan entails four focus areas: Education, Operations, Demonstrations and Sustainable Community.

## Education Goal

By 2020 we will have an educational and research framework ensuring that all students gain a solid understanding of sustainability concepts and graduate with the capacity and commitment to solve problems locally and globally. Leadership provided by the Executive Vice-President & Provost.



## Operations Goal

By 2020, through a combination of reductions and streamlining efforts, energy and greenhouse gas emissions will be reduced by 10% and waste by 50% (using 2015 as the baseline). Leadership provided by Vice-President for Administration & Business (VPAB).



## Sustainable Community

By 2020 the HKUST Sustainability Network will form a core social backbone to support and advance sustainability actions and policies across departments, schools, and the campus. Leadership provided by the President.



## Demonstration Goal

Develop visible on-site demonstration projects that contribute to campus sustainability goals while showcasing the work of HKUST researchers as contributors to solving global sustainability challenges. Leadership provided by Vice-President for Research & Graduate Studies.



# Education Goal

## Action Plan

Construct a sustainability curricular framework. The newly established Sustainability Education Advisory Group will consult the university community to find active ways to advance sustainability education.

Development of "Sustainability Learning Modules" for enhanced teaching and learning of sustainability competencies.

Strengthen the administrative and academic connections between the operations and academic sectors of the university to help develop the physical capacity to utilize the campus and grounds as a "living laboratory" for experiential learning in sustainability.

Strengthen the support networks available to faculty members to assist with teaching sustainability across different disciplines and curricula through the new Sustainability Education Community Group.

HOW CAN YOU CONTRIBUTE TO THIS COMMUNITY?

moral support & a warm body at your events - talking about the relevance of sustainability in our courses & sym

- Manage website/ facebook page - share my talents and resources

How teaching & learning the community



# Operations Goal

## Action Plan

Establish a Sustainable Operations Executive Committee (ExCo) to advise the VPAB and steer projects that present opportunities to achieve our reduction goals.



### Waste Reduction



### Energy Reduction

Enable the Cleaning Steering Committee to identify waste reduction opportunities and formulate recycling strategies for use of resources.



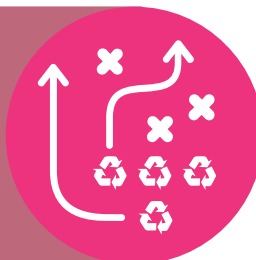
Develop an energy efficiency matrix with energy drivers and energy conservation measures over a four-year term (through 2020) to evaluate the priorities for energy and GHG reductions. Expand building recommissioning to identify energy saving opportunities.

Complete food waste collection across the campus including all the caterers, staff quarters, student halls and offices.



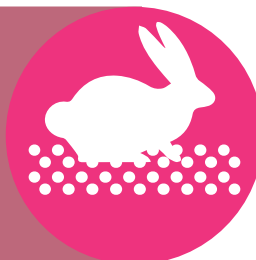
Implement a green labs strategy, including an ultra-low temperature (ULT) freezer set of purchasing and maintenance guidelines, as well as an action plan to decommission, upgrade, and maintain fume cupboards.

Develop waste recycling strategies by streamlining waste collections and separation, increasing recycling bins and convenience for users, educating cleaners, developing recycling stations for minor works contractors.



Facilitate regular Energy Performance team meetings to review energy consumption data and build energy-saving capacity through operations and newly invested projects.

Develop recycling programs for animal beddings and landscape waste with outside contractors. Expand collection and recycling of Styrofoam, wood, plastic banners and electrical appliances from campus community. Reduce waste from sources, including strategies to reduce packaging from purchased items.



Utilize the IT infrastructure in ways that can reduce waste and energy from academic and operational activities.



Develop and implement a metering strategy for the whole campus to make building energy consumption transparent and accessible by students and faculty for use in coursework and student projects.

# Demonstration Goal

## Action Plan

Develop educational projects that are visible and accessible for students as learning tools and research projects from HKUST scholars, to explain the theories and applications of their work.

Demonstrate the university's leadership by creating a "disposable water bottle-free campus" and other campaigns to reduce disposables.

Explore ways of better highlighting sustainability ideas and principles through "showcases" of technologies, efforts, or actions that make sustainability more visible.

Expand the real time energy demo initiatives in residence halls and lab areas.

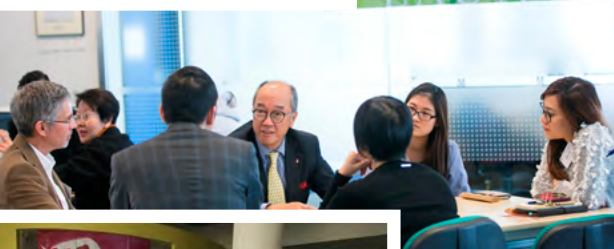
Explore renewable energy project demonstrations on campus for campus community and visitors.

Identify interested University researchers to explore research areas of opportunity on campus. Develop joint applications for grants.



# Sustainable Community

## Action Plan



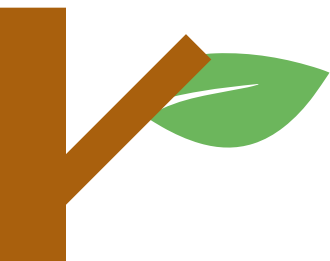
Establish an HKUST Sustainability Network to infuse sustainability initiatives into office and departments and across the University. The Network comprises Sustainability Management Officers, who are members assigned to serve in an official capacity as their office or department's representative to support the campus initiatives on sustainable office practices.

Establish a Green Team of staff and student volunteers to develop hands-on projects that improve the conditions on campus, with particular attention to promoting waste reduction and recycling, sustainable dining, and reducing disposables.

Facilitate the Shanghai Commercial Bank-HKUST Sustainable Campus Leadership Program to establish student-designed green campus projects to strengthen collaboration between administrative departments and the student community on improving a sustainable campus environment.

Create issue-targeted volunteer groups to improve conditions in specific situations; a Gardening Club to engage the community to beautify the campus, and a Green Labs Champions group to promote green lab practices and help achieve sustainable operations goals.

Implement a "Lunch and Learn" speaker series to bring new ideas, practices, and approaches to the attention of operations staff.



HKUST  Sustainability



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[GREEN@UST.HK](mailto:green@ust.hk)