

# PATHWAYS FOR CONTRIBUTING TO A SUSTAINABLE SMART CAMPUS: NEW FUNDING AND COLLABORATION OPPORTUNITIES

## Workshop Theme: Well-Being

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Thank you for participating in this second “Pathways” SSC project development workshop. The purpose of the workshop is to build a collaborative network of experts to identify new project opportunities for project development and funding. The theme for this workshop is Campus Well-Being, recognizing that the health and happiness of our campus members is a key driver in achieving our campus sustainability goals.

We have identified several areas of opportunity for research and project development.

### Creating productive workplace environment

Focus on quality indoor study and work spaces

*Conditions:* Investigate how renovation standards could provide more natural lighting for work areas and increase comfort levels relating to temperature and humidity

*Design:* Design for well-being: lighting, temperature, air quality, furnishing, color scheme, acoustics, etc.

Focus on measurement

*Monitor:* air quality indoors and outdoors and make the readings available and transparent

*Data:* Develop a set of indicators that can be used to benchmark happiness and well-being for faculty, staff and students

### Health, food, and fitness

Focus on availability, quality, and healthy aspects of food on the campus:

*Investigate:* access to healthy and nutritious food options, other alternative diet options (e.g. vegan, vegetarian, gluten-free) to cater for the diversity of campus community needs; provide nutritional information and promote healthy diet on campus

Focus on good health

Intervention: encourage physical exercises (e.g. free online and on-campus sessions to students and staff); encouraging use of stairs

Intervention: accessible places on campus that enables students to lie down and take nap (e.g. nap pods near learning commons/ counselling and wellness center/office)

Activities: relaxation exercises (e.g. meditation, sleep practices, yoga, etc), walking trails on campus and other means of clearing our minds.

## Relieving stress and anxiety

Focus on physical stress and anxiety relieving measures

Activities: Investigate how gaming, events, or social gatherings can be used to reduce stress. Explore how to reduce overlapping programs or services and strengthen cross-departmental collaboration

Focus on work-life balance issues

Interventions: Investigate flexible modes of working by devising policies to cater to different needs of our staff. Include evaluation of software or technologies necessary to support flexible work arrangements. Include evaluation of schedules and adapted work

Focus on creating the conditions for harmony, respect, civility

Interventions: Look into examples of campaigns designed to encourage civility and kindness (See Singapore Kindness campaign)

Data: Develop KPIs and data on how we can track and measure the performance of diversity and respect goals.

Focus on the areas that cause the most stress

Interventions: investigate the culture of competition and structural issues on university grading systems

Interventions: explore happy index: time-out, companionship (social isolation due to pandemic), skill-set (emotional intelligence), self-discovery, mingling activities (that speak to students' needs), sense of ownership.

Data: Develop a university-wide inventory of student-related surveys, well-being measures, and activities that can become a benchmark for evaluation and progress

## Utilization of campus spaces

Focus on creating a sustainable, accessible and inclusive environment that promotes learning and enhance social connections.

Design: evaluate spatial flexibility in terms of teaching and learning configurations that can be changed to accommodate different forms of teaching delivery and evolving pedagogies (e.g. "Settings" by Amsterdam)

Design: evaluate communal space for students to chat, work and relax with appropriate connectivity and power sources and settings that encourage small group meeting with some degree of privacy.

Intervention: find ways to take advantage of underutilized spaces on campus for use by the campus community. Include clear signs and way-finding that make navigating campus easy

## To Do Before the Workshop!

1. Please read through these background materials to get a better sense of the opportunities on this campus for smart and sustainable solutions. All of the campus challenges were identified by our operations professionals, who will be active partners in developing the solutions.
2. Please identify several of the areas that are of personal interest to you. *They do not need to be directly connected to your current research!* A goal of the workshop will be to form new teams with diverse talents, so feel empowered to explore outside your comfort zone.
3. Be ready to explain to others your special skills or areas of focus.

## A Note About Funding

Our ultimate goal is to develop projects, test them, learn from the results, and then extend those benefits to the greater Hong Kong community. We call this “from Seed to Market,” and reflects our intention of supporting new projects throughout all phases of development. As such we have several sources of funding:

- **SSC funding** is designed to help specifically with testing of ideas on campus. At the earliest stages, seed funding is available to help with preliminary designs and idea development, and then full SSC grants are available when the projects are ready to be implemented on campus.
- **Funding for Seed and Translational Projects** is available from [HBJRI](#), [HKJRI](#), [HCIC](#) and industry-sponsored joint labs and centers to support projects that demonstrate advancement in technological innovation aiming for technology licensing, collaboration, or establishment of a startup. Seed project funds include [Bridge Gap Fund](#) with a technology focus that aligns with TTC technology clusters, Kaisa Seed Fund for frontier technology related to Robotics and Autonomous Vehicles, and a new seed fund by ATAL donation to support environmental technologies and sensors development.
- **Funding for Entrepreneurship** includes [TSSSU](#), [U\\*STAR](#), [Tech-Ship](#), and others to facilitate joint entrepreneurship development of student, alumni and faculty from ideation to prototyping, from marketing to acceleration, from cross-disciplinary collaboration to transform innovative ideas into value-added solutions. Both the [HKUST Entrepreneurship Fund](#) with an initial fund size of HK\$50M intended to be a capital investment and the [HKUST Entrepreneurship Program](#) that provides space and incubation support are solely for HKUST startup companies. For more information, please visit [KT Hub](#).

Through these three sources, we believe we can support innovative ideas all the way from initial new idea stage through pilot testing and finally into the community as a proven concept, marketable product, or foundation for a start-up.

Your participation in the workshop will provide the insights we will all need to identify how to support your team and new project as it develops.

## Building the Teams

One of the key advantages of HKUST is our diversity of talents. We believe that the best projects, and those with the highest potential for success, are ones that are supported by a diverse set of team members and partners. In fact, the diversity of the team is one of the core criteria for evaluation for SSC funding.

This workshop will include people from across the campus with a wide range of skills and professional interests. Please take a look at this table to see which kinds of skills could help as you put together a project team.

<b>Technical Skills</b>	<b>People and Behavioural Expertise</b>	<b>Teaching, Learning, &amp; Communicating</b>	<b>Knowledge of Natural Systems</b>
<ul style="list-style-type: none"><li>- IoT and sensing tech</li><li>- Big data, AI, and machine learning</li><li>- Focused analytics</li><li>- Software and hardware solutions</li></ul>	<ul style="list-style-type: none"><li>- Motivation, incentives, and social norms</li><li>- Market research and understanding of decisions</li></ul>	<ul style="list-style-type: none"><li>- Developing non-standard educational outcomes</li><li>- Creating high visibility</li><li>- Clarity of message</li></ul>	<ul style="list-style-type: none"><li>- Energy resources</li><li>- Water (ocean and freshwater) resources</li><li>- Biodiversity and landscape</li></ul>