

8 DECENT WORK AND ECONOMIC GROWTH



Research & Innovation

Building Environmental, Social, and Governance Capabilities in Small and Medium Logistics Companies

The reliance on environmental, social, and governance (ESG) performance measurement to inform investment decisions has significantly increased in recent years, particularly among listed companies: the higher their ESG scores, the more sustainable their ongoing business development. The current ESG measurement frameworks are built on rating schemes, such as KLD and ASSET4, which are, however, difficult to implement in small and medium enterprises (SMEs) with unstructured and non-standardised business data, especially in the field of logistics and supply chain management. There is thus a lack of a systematic framework for listed companies to source responsible SMEs, such as logistics service providers, to maintain desired levels of ESG performance.

To address this issue, PolyU researchers have proposed an ESG development prioritisation and performance measurement framework employing the Bayesian best-worst method, which enables the group decision-making capability to prioritise ESG development areas and formulate a performance measurement scheme. Through consolidating views from logistics practitioners, it was found that fair labour practices, reverse logistics, and human rights in supply chains are the paramount areas to further enhance ESG capabilities in the logistics industry. In addition, the viability of ESG performance measurement has been validated, whereby sustainable and human-centric logistics practice can be developed to achieve business sustainability.

Using Heart Rate Variability to Identify Physical Fatigue in Construction Workers

Most studies have analysed heart rate variability (HRV) using nonlinear methods, such as approximate entropy, the largest Lyapunov exponent and correlation dimension in patients with cardiovascular disorders. However, few have used it to determine the level of physical fatigue experienced by construction workers. To bridge this research gap, PolyU scholars conducted a study examining linear and nonlinear approaches to HRV analysis.

In the research, a textile-based wearable sensor was used to monitor the participants' HRV after they had completed 60 minutes of bar bending and fixing tasks. The results demonstrated that both linear and nonlinear HRV analyses can be used to detect and classify physical fatigue in construction workers and that HRV values change significantly in response to physical work, indicating a change in the relative activity of cardiac autonomic functions as a result of fatigue.

Using the ways in which HRV parameters vary in response to increased workloads provides a sensitive marker for contrasting construction workers with and without cardiovascular disease. It also allows site managers to track how quickly workers become fatigued so that they can lighten their workload to reduce the likelihood of their becoming severely exhausted or to suggest that they take a break to prevent injury.

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Teaching & Learning

Subject: ESG Investment and Green Finance

Offered by the School of Accounting and Finance, this postgraduate subject is designed to provide students with updated knowledge about the key concepts, principles, disclosures, and regulations pertaining to environmental, social and governance (ESG) issues and the related major emerging challenges, including climate risk and disclosure standardisation, that would impact its future direction.

Students are taught the economic principles of various frameworks for incorporating ESG and responsible investing practices, from both the investor and corporate boardroom perspectives. The curriculum also explores different approaches to ESG investing such as inclusion, engagement, and screening, as well as the full spectrum of ESG products and strategies across the equity and fixed income asset classes, for instance, green bonds and sustainability indexing. This enables students to identify and evaluate popular sustainable finance and green products by examining the theories, drivers, and financial impacts of corporate social responsibility. Ultimately, students are well-equipped to formulate financial strategies by making use of their knowledge of the current and future trends in ESG reporting, the perception of climate risk, and the development of carbon pricing and carbon trading systems.



Entrepreneurial seminar provided to PolyU students

New Undergraduate Programme to Nurture Innovation and Technology Entrepreneurs

The University continues to look to the future and enhances its curriculum to nurture innovation and technology talent in order to meet future societal needs. This academic year, the “X + Innovation and Entrepreneurship” undergraduate programme was launched to provide students across various disciplines with the essential knowledge and skills needed to thrive in the rapidly evolving innovation and technology landscape. Participating in internships and exchange trips in the Greater Bay Area and overseas, students can benefit from numerous outreach opportunities in different start-up environments. PolyU has also been working with ecosystem partners and collaborators including the Home and Youth Affairs Bureau, the Youth

Development Commission, and the Hong Kong Government’s We Venture scheme to provide comprehensive entrepreneurial training and support to help students navigate their entrepreneurship journey and overcome the challenges entailed in a variety of forms: workshops, seminars, mentorship support, legal advice, and networking opportunities. For instance, this academic year saw the launch of the Startup’s Guide training series, from which students can acquire essential knowledge across an extensive range of topics such as crowdfunding strategy, contractual matters, digital marketing, and e-commerce.





Outreach & Engagement

New Trolleys and Health Therapies for Underprivileged Elderly Waste Pickers

Joining up with the Evangelical Lutheran Church Social Service - Hong Kong and Waste Picker Platform, the Jockey Club Design Institute for Social Innovation has carried out a scaling-up project, Pickers' Link, to design over 40 recycling trolleys and offer physiotherapy and occupational therapy for **more than 80 aged waste pickers**, which was **supported by around 20 local corporations in the North District**. A community education campaign was also conducted to recognise the contribution of waste pickers to the local recycling industry. Through this outreach project, interdisciplinary efforts were

brought together to serve the underprivileged workforce, of which impact was evaluated in research conducted by the Department of Applied Social Sciences and Department of Rehabilitation Sciences.



Creating the Next Generation of Cathay Pacific Pilots

Recognising the civil aviation industry as key to Hong Kong's development, a decade ago PolyU and Boeing co-founded the first Aviation Services Research Centre in Hong Kong, an exemplar of academic-industry collaboration on research and innovation. The Department of Aeronautical and Aviation Engineering was also established to produce talents and strengthen scientific research. With a view to further nurturing local aviation talents and developing Hong Kong as an aviation training hub, the University has signed a three-year agreement with Cathay Pacific to collaborate on a new 55 to 60-week integrated course for the Cathay Pacific Cadet Pilot training programme that comprises theory, simulator training, and flight training.

PolyU will provide a 150-working-day theoretical ground training course that includes a minimum of 750 hours of instruction and examination in areas including principles of flight, meteorology, human performance, general navigation, instrumentation, radio navigation, and air law. The first batch of **nearly 25 candidates** have already started the course and will commence flight training overseas before returning to Cathay City for multi-crew simulator training. In parallel with this integrated course, Cathay Pacific is also conducting cadet pilot training courses based upon the original programme module in Adelaide.

Governance & Operations

Safe, Healthy, and Equitable Working Environment

PolyU values its staff members and prioritises cooperation and harmony between them as being vital to the success of the University as a world-class institution with outstanding achievements driven by application education and research. Thus, a due process of employment practice appeal has been established that adheres to a set of detailed guidelines on grievances and human resources related appeals, where the University Grievance Committee is responsible for reviewing and handling formal complaints.

In addition, the PolyU Staff Association, a registered trade union, welcomes all full-time staff, with the exception of the President and his deputies, to join in order for them to contribute to enhancing the quality of professional life in the University. Regular meetings are held with University management to proactively engage staff on important policy changes.

Moreover, as a means to promoting a culture of work safety in the University, the Health and Safety Office organises the PolyU Occupational Safety and Health Excellence Award to encourage all staff members to contribute to a safer and healthier workplace by incorporating technology into their innovative ideas for sustainable safety improvement. This academic year, the Campus Facilities and Sustainability Office won the Gold Award with their Safety Management System for Campus Tiling Repair Project.

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