SMU-DHL collaboration yields unconventional solutions in sustainable logistics

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In a successful example of industry-academic cooperation, Singapore Management University's (SMU) Green Transformation Lab (GTL), set up jointly with DHL, has worked with more than 150 undergraduate and postgraduate (both Masters and PhD) students across various SMU programmes since the lab was set up in 2013. [PHOTO: SINGAPORE MANAGEMENT UNIVERSITY]

IN A successful example of industry-academic cooperation, Singapore Management University's (SMU) Green Transformation Lab (GTL), set up jointly with DHL, has worked with more than 150 undergraduate and postgraduate (both Masters and PhD) students across various SMU programmes since the lab was set up in 2013.

Many of the students - who were mostly from the School of Information Systems and Lee Kong Chian School of Business, with a smaller number from the School of Economics and School of Social Sciences - have found jobs in industry, thanks to their stint at GTL.

Hosted at SMU School of Information Systems, GTL aims to accelerate the evolution of sustainable logistics across the Asia-Pacific region. GTL's mandate, according to an SMU spokesman, is to create innovative solutions to help organisations transform their businesses towards sustainable green growth, and drive beneficial change in supply chains across the region through education, research and best practice development.

SMU teamed up with DHL to jointly launch GTL in 2013 with an investment of S$2 million from the global logistics company. Part of the investment was in cash for operational expenses of the lab and to provide scholarships. The other part was in-kind contribution by DHL supply chain domain experts (starting with two members, later increasing to three) who were stationed at the lab to work with the professional staff, faculty members and students of SMU.

In 2015, the collaboration was extended for another two years with fresh investment from DHL. The number of DHL supply chain domain experts to be attached to the lab is expected to be increased to four. SMU will continue to provide in-kind contribution in terms of services and thought leadership from faculty members, especially in information systems and operations management.

Assistant Professor Tan Kar Way of SMU School of Information Systems and academic director of GTL noted that the lab was built on the complementary skills and resources of SMU and DHL. "SMU's strength in information systems, operations and risk management, business strategies, law, economics and social sciences, allied to DHL's global leadership in sustainable logistics, is a powerful combination."

Students have worked with GTL through internships (part-time and full-time), programme capstone projects (with or without scholarship) and course projects. DHL has also been invited to give talks in classes and conduct user experience experiments in the classes, she added.

One of the highlights of the lab has been a multi-disciplinary project involving SMU faculty members and students from the School of Information Systems together with DHL logistics experts to overhaul DHL's existing carbon dashboard - an online tool that measures carbon emissions along a manufacturer's supply chain and relates it to other supply chain management parameters.

"GTL not only gave the application a more user-friendly interface, but also added new analytical features to pinpoint graphically and exactly where fuel was used and how emissions were generated. The revamped application has been in use by DHL and several of its partners since 2014," Prof Tan said.

She added that one of the undergraduate interns at the lab built the fully-commercialised carbon dashboard 2.0 and has been hired by DHL upon graduation. In another instance, another student who did his Master of IT in Business capstone project with GTL found himself a job at a leading multinational company with strong expertise in supply chain management upon graduation.

"The scholar was from the financial industry prior to joining GTL as an intern. The experience in engaging with GTL and DHL has provided him with broader career opportunities," she added.

Prof Tan noted that the SMU School of Information Systems has collaboration initiatives with various industry partners, including Fujitsu, Tata Consultancy Services, DBS and Alexandra Health. "The GTL is unique in the way that it is a partnership with a domain expert in the logistics industry on the green agenda," she added.

Stephan Schablinski, director of GTL, and DHL's director of sustainable supply chain solutions, noted that "working closely with academia - literally sharing the same office space - provides us with insights not only into the latest research and technologies but also what the current generation of students, who will soon be in executive positions, expect of us in terms of innovation in sustainable logistics".

He added that what makes the lab different is the unconventional mix of academic standards and commercial pragmatism, which brings completely new approaches to light. "Our job at the lab is to stimulate and manage this innovation process so that it yields solutions that can provide important competitive advantages for DHL.

"As we actively engage students into solving real world problems, we frequently get surprised by the unconventional approaches students choose and how these approaches produce unexpected solutions to these problems.

"In addition, the students that we engage learn that the logistics and supply chain industry is actually more exciting than they initially thought, where in particular, innovation in IT and data analytics can make a big difference. We hope that this will contribute to making our industry more attractive for young talent," he added.

Mr Schablinski noted that from June last year, DHL has embarked on a relatively new management strategy focusing on companies creating measurable business value by identifying and addressing social problems that intersect with their business.

The growing scarcity of resources due to dwindling sources of raw materials and simultaneously increasing demand will pose huge challenges for all industries, he said and added that as an integral service to many other industries, logistics can help by proactively reaching out to businesses with various approaches to energy consumption reduction, recycling, and carbon emission offset.

"Logistics should be viewed as part of the solution - given its influence across the supply chain - so that it can continue to perform its integral role reliably and economically in the

future. The lab can help DHL and its customers in the transition to more sustainable growth - with knowledge transfer, new methods, pragmatic approaches and innovative IT applications," he added.