MEDIA RELEASE

Singapore Polytechnic and SP Group set up idea translation lab to develop ideas into real-world, energy-saving applications

Singapore, 3 April 2018 – Imagine a hybrid solar cone that produce more than five times the energy than a conventional solar cell. The cone uses solar-concentrating lenses to maximise energy absorption onto a solar cell. This prototype, called SCONE, is among the first to be produced by ideaBox, an idea translation lab set up by Singapore Polytechnic and SP Group.

ideaBox is a platform to turn promising ideas by tertiary students and SP Group employees into sustainable energy applications in everyday life. Singapore Polytechnic students will develop the products as part of their course work and final-year projects. They will also be guided by their faculty and SP Group mentors as they build their experience in areas such as engineering, design and media. SP Group and Singapore Polytechnic will jointly test and validate all products from ideaBox.

SP group will commit $1 million over the next three years, and kickstart a slew of initiatives, such as product development and testing for commercial viability, digital literacy for SP officers and ideation competitions.

Mr Wong Kim Yin, Group Chief Executive Officer of SP Group, said, “SP Group is committed to drive research and innovation that benefit consumers, helping them to save energy and cost. We strengthen our collaboration with Singapore Polytechnic by exposing their students to real-world challenges, test out new ideas and build solutions to implement the ideas.”

“Partnering SP Group allows our students to work with an innovative organisation to trial and pilot emerging technologies for the fast-changing world. This seeks to pique their interest and empower them to be solution-minded so that they can translate ideas into real-world solutions”, said Mr Soh Wai Wah, Principal and Chief Executive Officer of Singapore Polytechnic.

ideaBox will house and develop projects from ideation competitions. In June this year, SP Group will sponsor a national inter-polytechnic ideation competition that is organised by Singapore Polytechnic students. SP Group and Singapore Polytechnic will collaborate to develop and co-design next-gen outdoor cooling units. They will also develop electric vehicle charging units, with a view towards installing charging stations on the campus.

SP Group's bottom-up ideation journey started in 2016 with The Pitch, an intrapreneurship platform for SP Group employees to develop creative solutions. In 2017, SP Group extended the ideation outreach to tertiary students in universities, supporting the NUS-SP Group Varsity Challenge 2017 that comprised of NUS-SP Group Case Competition and Singapore Frontier Challenge.

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About Singapore Polytechnic (www.sp.edu.sg)
Established in 1954, Singapore Polytechnic (SP) is Singapore's first polytechnic. It has 10 schools that offer 46 full-time courses for close to 16,000 students. SP adopts a proven creative teaching and learning framework and offers students a holistic, authentic and industry-relevant curriculum, innovative and vibrant learning spaces, and enriching overseas programmes.

The Polytechnic is committed to producing competent and versatile graduates who are also imbued with sound values, so that they can be work ready, life ready and world-ready. SP has more than 195,000 graduates and among them are successful entrepreneurs, top executives in multi-national and public-listed corporations, and well-known professionals across various industries and leaders in government.

SP clinched the inaugural ASEAN People's Award in 2015 for its contributions toward the region's community-building efforts. SP is also the first polytechnic to be awarded the President's Award for the Environment in 2010 and the President's Social Service Award in 2011.

Follow SP on Facebook at http://www.facebook.com/singaporepolytechnic and Twitter and Instagram at @singaporepoly.

About SP Group
SP Group is a leading energy utilities group in the Asia Pacific. It owns and operates electricity and gas transmission and distribution businesses in Singapore and Australia, and district cooling businesses in Singapore and China. SP Group is committed to providing customers with reliable and efficient energy utilities services. More than 1.4 million industrial, commercial and residential customers in Singapore benefit from SP Group's world-class transmission, distribution and market support services. These networks are amongst the most reliable and cost-effective world-wide. For more information, please visit spgroup.com.sg or follow us on Facebook at fb.com/SPGroupSG.

Annex 1

Key Projects Featured

1) Scone

Project Brief

Scone aims to increase renewable energy generation in Singapore significantly using a solar cone. The solar cone is a hybrid that uses solar cone and solar-concentrating lenses to maximise energy absorption onto a solar cell. This cone promises to produce more than five times the energy than a conventional solar panel. It is essentially a higher efficiency concentrator photovoltaic that aims to harness more energy per unit area.

Utilising solar technology, a heat exchanger and a cone structure, the cone generates both solar and thermal energy. There is intention to implement the solar cone at the rooftop of residential units as it allows excess heat to be converted to heated water for residential usage. This technology taps on expertise from district cooling.

Benefits to customers

As it is expected to generate more than five times solar energy as compared to a conventional solar panel, customers using this technology can offset their consumption, thus leading to a lower utilities bill.

2) Cloud Nine

Project Brief

This project uses the collection of rainwater at the top of high-rise buildings to harvest gravitational potential energy as it falls from the top of the building to the ground. This is especially relevant in Singapore with a large population of tall buildings.

By retrofitting these buildings with the team's proposed mechanism – channelling the rainwater collected on rooftops down the buildings – it will generate energy through the process for storage and subsequent usage.

Benefits to customers

It uses the energy generated by falling rainwater as an alternate source of renewable energy generation besides solar and wind. It is suitable for countries that face land constraint like Singapore. The use of gravitational force and turbine increases the efficiency to harvest usable energy that can power up a 12-Watt LED light bulb for 21,150 hours. This could potentially translate into cost savings to residents, building management and Town Councils, possibly resulting in lower maintenance fee in the long-term.

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3) Savez

Project Brief
Savez's product is solar cell that mimics photosynthesis for organic, highly sustainable, and versatile energy use.

Benefits to customers
This product is sustainable, scalable and organic. It is also cost-efficient to produce.

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4) GreenLoco

Project Brief
This idea is to use human movement to self-generate electricity. It focuses on crowdsourcing energy, merging piezoelectric technology, wireless power transmission as well as Singapore's high population density.

Benefits to customers
This product allows customers to self-generate electricity and raise awareness of energy issues, allowing Singaporeans to contribute to the main grid.

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5) RoadX

Project Brief
RoadX is a power generation and transmission solution for Singapore's roadways. It combines the use of solar panelled, piezo-electric charging roads and roadside wind turbines with dynamic wireless charging through induction for electric vehicles. The plan to vary the usage of each component to suit local traffic conditions of roads.

Benefits to customers
RoadX aims to help customers reduce carbon emission and fossil fuel dependency. It also seeks to maximise Singapore's limited land for green energy generation and encourage the uptake of electric vehicles in Singapore.

Annex 2

Key Terms in Chinese

SP Group	新加坡能源集团
Singapore Polytechnic	新加坡理工学院
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Mr Soh Wai Wah Principal and Chief Executive Officer, Singapore Polytechnic	苏卫华先生 院长兼总裁
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