

Immediate release

"BuildING Our Future" Grand Challenge Finale
Twenty Teams of Secondary School Students Gather to Contribute Ideas
for Future Tram and Smart City

(Hong Kong , 5 December 2023) The first citywide transportation themed design thinking STEAM competition "BuildING Our Future" Grand Challenge finale had been successfully held on 2 Dec, 2023 at M+ Learning Hub. The "Smart Tram Forecast System" (「電車智能預測系統」) suggested by Chang Yi-lam Charlotte, Kong Suet-ching Scarlett, Tang Tsz-yau and Wai Chuen-yiu from Sacred Heart Canossian College, and the "Tram Configuration Modification" proposed by Chan Yikk Hong Skyler, Ngai Ching Ying, Yau Pok Yan and Yu Yik Tin from Cheung Chuk Shan College had won the champion of the Chinese and English Division respectively. Each champion team will receive a cash prize of HK\$10,000, while their schools will receive an 1-month tram body advertisement to showcase their students' outstanding achievement.



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"Smart Tram Forecast System", the champion of the Chinese Division, echoes the government's advocacy on smart mobility. The proposal is a multi-function smart traffic system that can provide the estimated time of arrival, destination and passenger capacity of the next trams in one go, with the aim to facilitate passengers to arrange their trip and optimize their travelling experience.

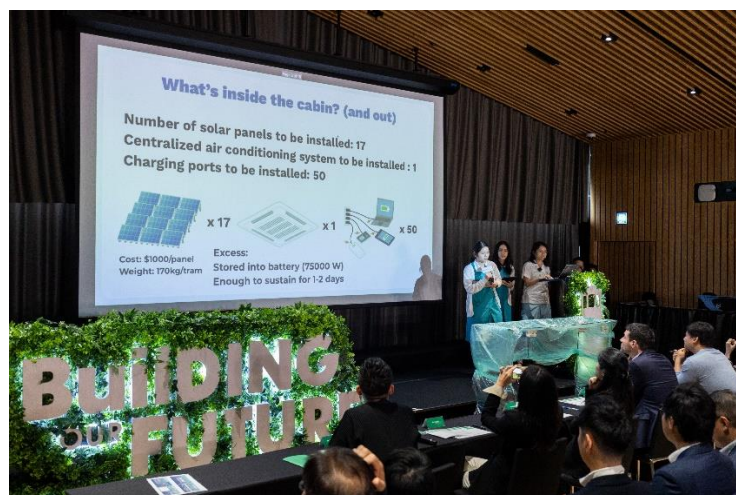
Winning students from Sacred Heart Canossian College said "We came up with the idea of "Smart Tram Notification System" through collecting the opinions from the passengers and motormen, as well as experiencing tram rides ourselves. Infrared sensor will be adopted to check the capacity level in the tram and signal it by red, yellow and green signal lights. The real time information can be delivered to a display screen in the tram stations to make it easier for passengers to plan their trips."

The champion of the English Division belongs to “Tram Configuration Modification” that aims to improve overcrowding on trams that is common during peak hours.

The team suggests that since most tram riders are short-distance passengers, switching the chairs on one side of the tram to a comfortable long backrest will not only free up more space for passengers’ movement in the tram cabin, but allow passengers to stand comfortably. This could reduce the risk of passengers losing balance when the tram decelerates or stops.

“By modifying the interior design of the cabin, we wish to bring about comfortable and safe tram rides during peak hours. Our proposal can alleviate the discomfort in an overcrowded tram. It will be more convenient for passengers to stand in the tram or to get off the tram from the back of the carriage,” suggested by the winning students from Cheung Chuk Shan College.

In the finale, ten finalist teams from the Chinese Division and another ten from the English Division each raised their own STEAM proposal covering topics in tourism, environmental protection, smart mobility, inclusivity etc. They competed and presented their ideas to industry partners from the education, innovation and technology sectors. After selection, the top three teams presented their proposals to all the guests in detail and conducted demonstration via their prototypes or applications. Based on the criteria such as creativity & originality, technical sophistication, user friendliness and feasibility, communication skills etc., the judges picked the winning team from each of the Chinese and English Division.



Students presenting their proposal at the finale

The Honorable Chu Kwok-keung, officiating guest of Honor and Legislative Council member representing the Education Constituency, said “Some proposals may sound imaginative. However, thinking out of box and view the issue in a broader context are

essential for an innovative mindset and are the values STEAM education advocate. I fully expect I will experience the creative proposals when I ride on trams in the future.”



Hon Chu Kwok-keung

Mr Nixon Cheung, General Manager of tramplus, the event organizer, mentioned “STEM education develops very rapidly. From having an additional “A” (Arts) as STEAM, and reaching to “STEAMS” right now, the “S” that was added means social service, which represents applying innovative technology to resolve social issues. In the future, the ability to make use of AI would be a watershed of individual capability. I am glad to see so many practical proposals boosting sustainable development and smart mobility which ultimately enhance the service level of the HK Tramways.”



Mr Nixon Cheung

Dr Jac Leung, representative from co-organiser HKUST, suggested “Tramways is an infrastructure with more than a century’s history. It is a paradigm of sustainable development. The students have to dig out the current operation concerns of HK Tramways, at the same time consider the feasibility and maintain the sustainable development of Tramways, which is not an easy task.”



Dr Jac Leung

"BuildING Our Future" Grand Challenge was held by tramplus, in collaboration with the Hong Kong University of Science and Technology and its innovation partner MIT Hong Kong Innovation Node. It encourages students to maximize the potential of new technologies, such as AR, VR, AI, and apps to deliver different STEAM proposals in the context of public transport and smart city to explore the future of Tramways' sustainable development. The competition aims to inspire local students to engage in innovation, to think like future leaders and innovators, and contribute ideas to the local transportation development and transform Hong Kong as a more livable and sustainable city.

The shortlisted teams were granted the exclusive opportunity to embark on a field trip to the Tram Depot. In addition, they participated in a complimentary "Masterclass" that enriched their design thinking skills. This insightful experience featured personalized training and guidance delivered by tramplus tutors to encourage students to craft their very own prototypes or apps, showcasing their STEAM creatives in a comprehensive manner.



Prizes and Awardees

Prize	Chinese Division Winning Team	English Division Winning Team
Awarded School (Proposal Name)		
Champion	Sacred Heart Canossian College (電車智能預測系統)	Cheung Chuk Shan College (Tram Configuration Modification)
1st Runner-up	S.K.H. Lam Kau Mow Secondary School (舒光活樂遊)	Marymount Secondary School (Fanny Pack)
2nd Runner-up	St. Mark's School (「共融號」環保電車)	Queen Elizabeth School (Lanelight – Lights Our Future)
Best Innovation Award	Wa Ying College (「叮」寧告戒)	Marymount Secondary School (Maglev Ding)
Best Design Award	Cheung Chuk Shan College (起風 – 抗熱濾污通天窗)	Creative Secondary School (Ramping Up Accessibility)
Best Presenter Award	Sacred Heart Canossian College (電車智能預測系統)	Cheung Chuk Shan College (Tram Configuration Modification)
Best Social Impact Award	Lui Cheung Kwong Lutheran College (清「風」送爽、「靜」如湖光)	Po Leung Kuk Celine Ho Yam Tong College (Future tram)
Best Sustainability Award	Shun Tak Fraternal Association Seaward Woo College (NO! NO ₂ ! NO! PRESSURE)	Good Hope School (TrackM)
Best Use of Technology Award	New Territories Heung Yee Kuk Yuen Long District Secondary School (電車新風)	Hong Kong Baptist University Affiliated School Wong Kam Fai Secondary and Primary School (Ding Ding Rider)
1st Place of Audience Choice Award	Wa Ying College (「叮」寧告戒)	Marymount Secondary School (Fanny Pack)

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About tramplus

Founded in 2021, **tramplus** is a sister company of Hong Kong Tramways and owned by the RATP Dev Group.

With the vision to advocate local STEM education, **tramplus** teams up with the world's leading institutions and educators to provide easy access to the world-class online and in-curriculum STEM education, by blending in the rich legacy of tram engineering wisdom with modern tech knowledge.

tramplus focuses on STEM-related curricula including basic science, mechanical and electrical engineering, coding and urban development. By approaching these topics from a daily life perspective, **tramplus** hopes to inspire students to adopt a radical mindset and equip them with a STEM foundation. Hence, equip them with the knowledge and skills to develop a smarter and a more sustainable future for the city.

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