

Lingnan University SDG Report



1. Air Purifiers for the Needy

Through the Lingnan Entrepreneurship Initiative (LEI), staff and students designed and developed an effective low-cost air purifier to improve the living conditions of those living in Hong Kong subdivided units (SDUs). Guests and residents in SDUs in Sham Shui Po helped to compose the low-cost air purifier in Dec 2022 for distributing 1,000 units of air purifiers to occupants of SDUs. Research about Air Quality in the subdivided units was conducted in 2023 to know more about the effectiveness of the low-cost air purifier.





<https://www.ln.edu.hk/ht/projects/air-purifier>

2. CREW Wheelchair

LEI has developed a power-assisted wheelchair control system to address the needs of caregivers. In a city with hilly terrain, this innovation allows caregivers to navigate wheelchairs with greater ease and safety. The Crew Wheelchair that won the 48th International Exhibition of Inventions Geneva underwent further technological developments to better fit its intended caregivers, who are older carers. The new design features in 2022-23 include an improved control system that includes (1) road condition sensing, (2) adaptive balance sensing & (3) ergonomic handles for the new features.



<https://www.ln.edu.hk/ht/projects/crew-wheelchair>

3. 12° Mask

LEI has developed a fully transparent angled face mask with design principles that address the needs of special-needs communities (e.g., the deaf and students with special education needs). This innovation allows lip-readers clear access to mouth movement. The mask was donated to people in need with the support of different donations. It was manufactured and commercialized in 2022 and 2023.



<https://www.12-mask.com/>

<https://www.ln.edu.hk/ht/projects/transparent-mask>

4. Awards by Geneva International Exhibition of Inventions

The following humanitarian innovations, led by researchers and students from LEI, have received prestigious awards from the Geneva International Exhibition of Inventions:

- CREW Wheelchair: Gold Award 2022
- 12° Mask: Silver Award 2022
- Sub-Divided Units (SDU) Air Purifier: Silver Award 2023
- FlashGreen: Silver Award 2023

LEI's air purifier for subdivided units receives Silver Medal at the Geneva International Exhibition of Inventions - Specials - Issue No. 141 - Lingnan Touch - Lingnan University (ln.edu.hk)

5. Smart Shopping Cart Project

LEI provided support to Pui Shing Catholic Secondary School in prototyping their Smart Shopping Cart, winner of Lingnan University's Age-friendly City Project STEM Competition in 2021. The shopping cart is meant to ease the heavy load of grocery shopping for the city's elderly. LEI provided hands-on technical training to the students to develop their ideas into a workable prototype and provide support for a patent application in 2022-23.

[STEAM 教育 | 培聖中學免提追蹤買餸車 獲大學資助擬申請專利量產 \(hk01.com\)](#)

6. Lingnan Robotics Team

Supported by LEI, the Lingnan Robotics Team was formed to promote innovative science and technology on campus. The team participated in Robocon 2023 and was awarded the Best Institute Entity Award.



[Robotics Team - Ecosystem - Lingnan Entrepreneurship Initiative \(LEI\) - 嶺南大學 \(ln.edu.hk\)](https://www.ln.edu.hk)