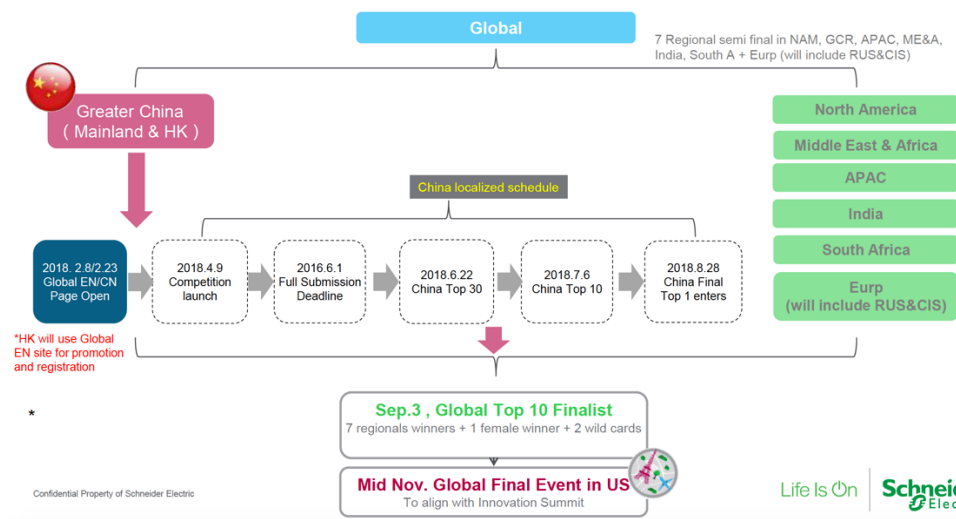


Schneider Electric Go Green in the City is a challenge requiring participants to solve one of the four real-life case challenges, including sustainability, digital economy, smart manufacturing, supply chain and cyber security, within energy management or submit an original idea for efficient energy management in a city environment. It is a global business challenge with more than 24 thousand participants, providing more than 1,400 case submissions.



My partner, Yeung Yip Yan, and I finished a “Design of Underground Garages with New-type Ventilation, Smoke Exhaust and Lighting system.”. It provides an environmental-dependent control system for underground garage and tubular daylighting system with both natural light and exhaust gas ventilation. This design won us a place in regional final in June 2018. Schneider Electric then assigned us with two mentors to improve our case and presentation. The regional final took place in Beijing, China during Aug.27th to Aug.29th. Activities includes rehearsal, presentation by top 10 teams, evaluation by Schneider Electric professionals and competing for top 1 to enter Global Final. We Finally won the Second Prize in the Reginal Final with our creative ideas and exquisite design.

China Mainland & HK Timeline & Milestone



Throughout the competition, we expanded our horizons in many different areas and equipped ourselves with much knowledge and skills useful for future life. As the competition asked for innovative designs, we brainstormed a lot of possible ideas, evaluated their plausibility and benefits and even merged different ones together to finally decide the topic. The brainstorming and judging process were very valuable as they provided us an opportunity to examine carefully to the environment surrounding us and find the urgent problems to be dealt with in daily life. Besides electrical and electronic engineering, the process to present our ideas required knowledge in mechanical engineering and computer science as well. We made best advantage of this chance and learnt about the intersectional areas by reading papers, making models and using professional software. This definitely offered great help me to become a versatile engineer in the future.

The mentors before the regional final brought business information to our project and opened a brand-new prospect for us. As an undergraduate student majoring in electronic engineering, I focused mainly on technological aspects and seldom noticed the business value of a product before. This competition, however, led me to the typical operation of a company and taught me to be more economically practical when building systems. I believe that with this concept in mind, I can design products that better fit my company in the future and really fulfill the need of market and daily life.



HIGHLIGHTS

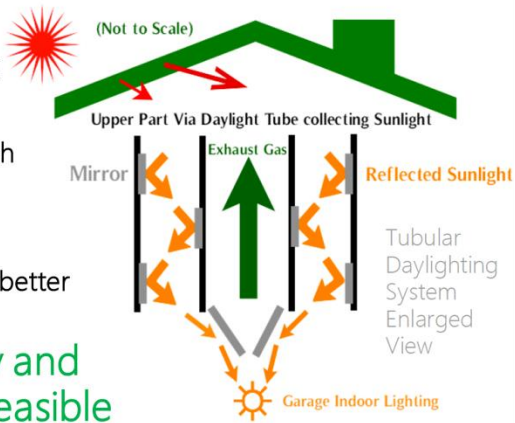
- Bring them inside!
- Use the same set of device!

Win-win Solution

- ★ **For city and the Earth:** Building green city with less energy consumption and creating healthier environment
- ★ **For companies:** Saving money for electricity, maximizing device utilization, and providing better service (sensory enjoyment) to customers

Combination of lighting and ventilation system

Sunlight and fresh air are both **rich resources outdoor** but very limited in underground garages.



(Not to Scale)

Upper Part Via Daylight Tube collecting Sunlight

Mirror

Exhaust Gas

Reflected Sunlight

Tubular Daylighting System Enlarged View

Garage Indoor Lighting



Current ventilation ducts

Technologically and Economically Feasible

- ★ Computer Air Monitoring System is so widely-accepted that **Schneider** has a popular PM2.5 household detector in Chinese market.
- ★ Tubular Daylighting System is mature and common in optics research.
- ★ Many underground garages already have ventilation ducts, on whom upgrade work can be carried out..



In addition, our skills of presentation and communication enhanced greatly. In the regional final competition, participants were required to make a 20 minutes presentation to explain our ideas. Considering the constitution of the audiences and the relatively long time, we made up the presentation with stage performance, questions and answers and interactive sections. The relax and harmonious atmosphere won the audiences' hearts and greatly facilitated the acceptance of our product.



All in all, this competition was a valuable experience for me. I acquired much knowledge in different areas and skills important for my future career. The cooperation with Schneider Electric provided me a chance to take a close look at the operations of commercial companies and prepared me for working as an engineer. I will definitely regard the prize as encouragement and work harder in the future.



