

競賽介紹

第五屆英國大學專題競賽開跑啦！每年藉由比賽，發掘了許多專才型資優生，並提供高額獎學金以及進入英國名校的門票。今年一樣由享譽國際的世界百大雪菲爾大學和蘭卡斯特大學在臺主辦，以期望今年臺灣學生依舊能大放異彩，在更寬廣的國際舞台，一展長才。

The University of Sheffield STEM project

Background

Scientists predict the world is going to experience more frequent natural disasters, including floods, tsunami, droughts, bush fires and hurricanes.

Taiwan is vulnerable to many natural hazards. Typhoon, earthquake, landslide, flood, and debris flow are the five main natural hazards affecting Taiwan. Typhoon and earthquake are the most serious and destructive hazards that cause huge damages and economic losses.

The increasing frequency of extreme weather events and rising sea levels caused by global warming endanger Taiwan's environment and survival. Taiwan's average temperature in the past two years has been the highest in 100 years. Atypical heat waves have been causing water shortages, damaging the economy, threatening the people's welfare, and restricting the generation of hydroelectric power. To make matters worse, sudden torrential rains from a tropical depression caused severe flooding across southern Taiwan, seriously impacting people's lives and damaging infrastructure and property.

The Challenge

Your challenge in this project is to Design and Build an Affordable, Sustainable Smart Home that is suitable for a family of 4, housing 2 adults and 2 children (aged 7 and 12).

Your solution should consider but not limited to :

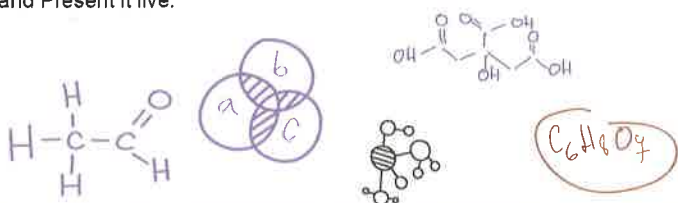
- The typical family behaviour patterns you would expect of such a household.
- The different ways that you could monitor behaviour and energy generation and usage within the household.
- Use of smart systems.
- Various types of natural disasters and climate change issues that impact Taiwan.
- Various types and cost of materials used to design and build your house and how they could be used to improve sustainability.

Deliverables

Qualifying Round: the presentation of the proposed design is limited to a 10-15 mins video presentation and should contain:

- A short presentation summary of the Affordable, Sustainable Smart Home concept.
- Design and sketches of the home building plan showing sustainability technology and materials needed to build a house in Taiwan.
- A discussion of particular solutions that have been designed to meet the sustainability brief
- Some comments on the cost considerations
- Some comments on the safety considerations
- A brief summary of / reflection on what you have learnt, what went well and how could you improve it for next time, including how did you perform as a group.
- Presentation of Ideas

Final Round: Build a Model of your Affordable, Sustainable Smart Home and Present it live.



Lancaster University Business project

The impact of the Covid-19 pandemic offers Universities an opportunity to build upon and improve campus sustainability. In particular, considering how they can create outdoor classroom environments given the worldwide changes in working conditions.

The Challenge

Your challenge in this project is to transform Lancaster University campus into green and sustainable under a million pound budget. The purpose of this project is not only eco-friendly change, but also to bring economic benefits to the University.

Your project should:

- Design a practical business plan for sustainable change on Lancaster Campus from the aspects of building, energy, water or waste.
- Elaborate your ideas. Provide other successful examples to support them.
- Illustrate the business strategy and financial plan. e.g. budget distribution.
- Think of the expected value and benefits that can bring to the university, e.g. boost the local industry or develop the business cooperation with other institutes.
- Include short-term and long-term business developments and other details.

DO NOT emphasize on the process of how it changes, but FOCUS ON the business model you will use to this project.

Qualifying Round: The business plan (PPT) along with 10-minute video explaining your sustainable concept and how it will impact the University.

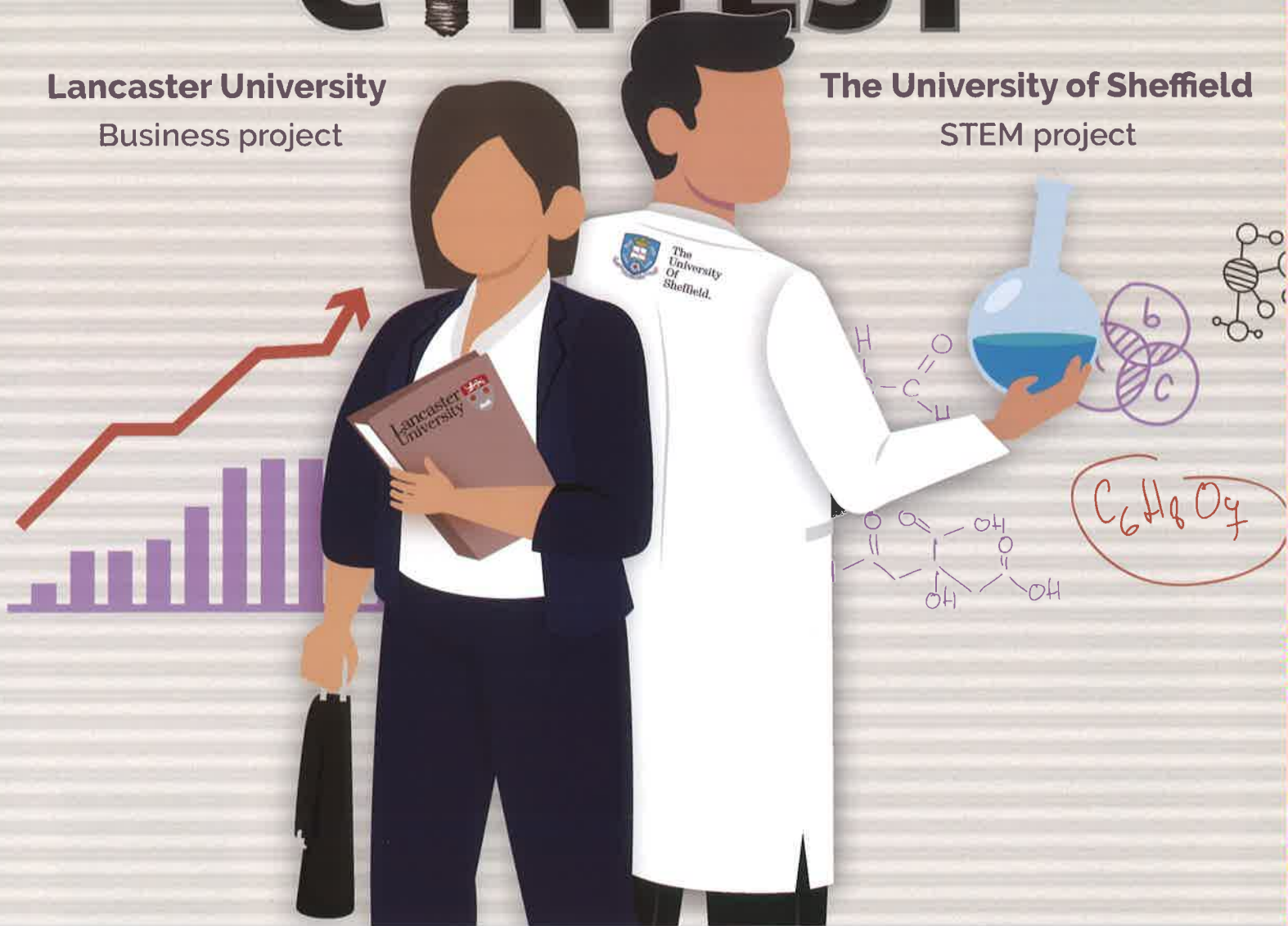
Final Round: Present your business plan live (PPT). You can add any other multimedia to support your presentation.



5TH PROJECT CONTEST

Lancaster University
Business project

The University of Sheffield
STEM project



優勝隊伍可獲得雪菲爾大學或蘭卡斯特大學半額獎學金或 1500 英鎊等值禮券



詳細競賽資訊
www.isc-edu.com

參賽資格：高 1~ 高 3 學生

報名方式：掃描 QRcode，填寫線上報名表

參賽辦法：1. 科學組／商業組皆可 1-3 人組隊參加（限同校學生）

2. 初賽繳交全英文自製影片及 PPT


3. 全台選出各 5 組（科學組／商業組）晉級決賽

4. 決賽將以初賽繳交之 PPT 現場進行簡報，由英國大學代表評選名次

5. 詳情請洽：(02) 2755-6363 LINE：27556363

主辦單位： The University of Sheffield.

 Lancaster University

 StudyGroup

承辦單位：ISC 國際學生中心