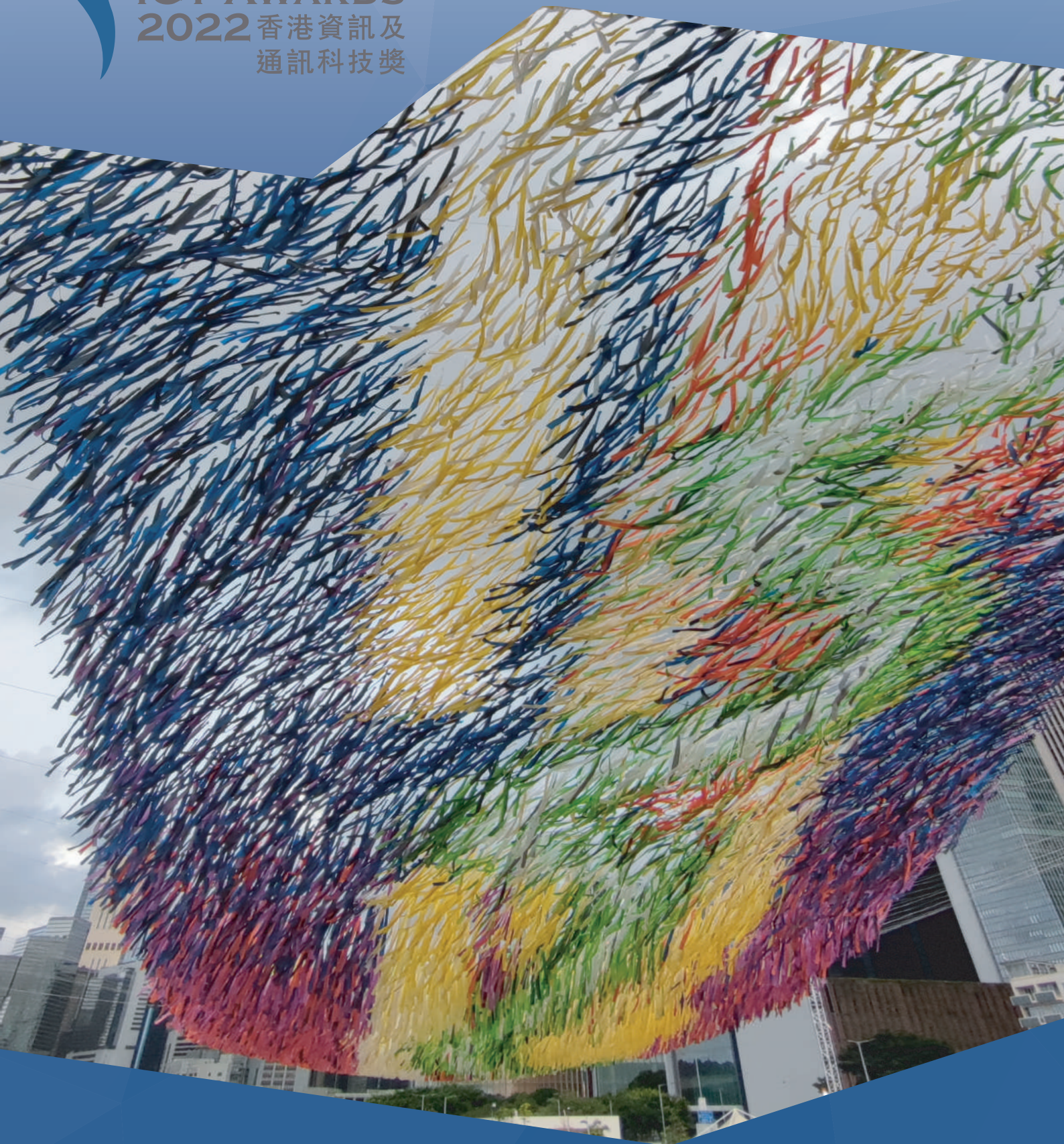




HONG KONG
ICT AWARDS
2022 香港資訊及
通訊科技獎

Student Innovation Award 學生創新獎



Leading
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HKNETEA
香港新興科技教育協會

10th

Student Innovation (Primary Schools)

Silver Award

學生創新(小學)銀獎

Hong Kong Baptist Convention Primary School 香港浸信會聯會小學

MA Tin Yuet / CHOY Ethan (馬天悅 / 蔡逸帆)

Virus, Goodbye! (Smart Antivirus Shoe Cabinet)

During the pandemic, many people use disinfectant spray to disinfect their worn shoes and put their shoes on disposable paper to prevent soiling the floor when they return home. The consumption of disinfectant spray and disposable paper has increased significantly.

Therefore, we have invented Smart Antivirus Shoe Cabinet. We hope that using this shoe cabinet could effectively reduce the consumption of disinfection spray and disposable paper.

Moreover, it is not only an environmentally friendly product, but also a product for fighting the virus and facilitating people's lives.

According to test results, we have rebuilt and improved the shoe cabinet. Our Smart Antivirus Shoe Cabinet Version 2.0 has been made.

Main Improvements:

1. Used VEX IQ parts to make the shoe cabinet. The structure is more stable.
2. Increased the size of the shoe cabinet. Suitable for adult shoes now.
3. Made a hole at the bottom of the shoe cabinet. Added transparent base and UV light. Modified the programme to add the function of disinfecting soles of the shoes.

Main Functions:

1. To disinfect soles of the shoes by using UV light.
2. To disinfect the interior of the shoe cabinet by using UV light.
3. To open and close the door automatically.

UV Lights Operation Logic:

	Door closed	Door open
Shoes inside	Switch on the UV light at the bottom to disinfect soles of the shoes	Switch off the UV light immediately
No shoes inside	Switch on the UV light both on the ceiling and at the bottom at the same time to disinfect the interior of the shoe cabinet	Switch off the UV light immediately



病毒BYE BYE ! (智能消毒鞋櫃)

疫情下，很多人回到家都會用消毒噴霧消毒鞋子，又用紙張墊著鞋子，以防弄污地面，所以消毒噴霧和紙張的消耗量大幅增加。有見及此，我們製作了智能消毒鞋櫃，希望能有效減低消毒噴霧和紙張的消耗量，既環保，又能消滅病毒，幫忙抗疫，同時方便人們的生活。

根據測試結果，我們重新製作並不斷改良，加入新功能。現在的智能消毒鞋櫃已是2.0版本。

主要改良：

1. 改用VEX IQ零件製作鞋櫃，結構更加穩固。
2. 加大了鞋櫃尺寸，可以放入成人的鞋子。
3. 在櫃底開洞，加入透明膠片及UV燈，並修改程式，加入消毒鞋底功能。

主要功能：

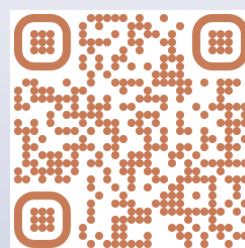
1. UV燈消毒鞋底
2. UV燈消毒鞋櫃內部
3. 自動開關櫃門

UV燈運作邏輯：

	已關櫃門	已開櫃門
櫃內有鞋	櫃底開啟UV燈消毒鞋底	即時關閉所有UV燈
櫃內沒有鞋	櫃頂及櫃底同時開啟UV燈消毒鞋櫃內部	即時關閉所有UV燈

Comments from Judging Panel 評審委員會評語

- Very useful design with clear objectives
- The overall idea is easy to operate and implement
- The UA light can shine upon the sole, it would be better if it could also be cast upon the vamp
- Need to solve the problem of putting multiple pairs of shoes
- 非常有用的設計，目標明確
- 整體想法好易操作易推行
- UA 燈照射鞋底，如果也能夠照射鞋面會較好
- 需要解決多雙鞋放入的問題



2-minute Video
2分鐘短片介紹



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Office of the Government Chief Information Officer
The Government of the Hong Kong Special Administrative Region
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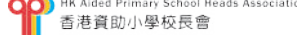


Innovation and
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創新科技署



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