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Pyupack 一套城市養蜂兼具溫室授粉的環境系統

Pyupack - A System of Common prosperity of Human and Wasp

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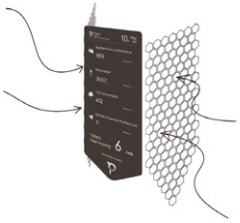
「如果蜂從地球上消失，人類將只能再存活4年。」
蜂與人類生活息息相關。我們吃的食物中，超過三分之一的作物需要仰賴蜂授粉才能存活。近年，「蜂群衰竭症候群」(Colony Collapse Disorder,CCD)」在世界各地發生，造成蜂群死亡，不但對全球生態環境引起衝擊、生態鏈的崩動，對人類亦是不可忽略的威脅。
Pyupack為一套城市養蜂與溫室授粉的環境系統。藉由獨居蜂出色的授粉能力，能為城市中的開花植物授粉，連帶增加城市生物多樣性，創造出全新且穩定的城市綠地生態圈。城市中部分的獨居蜂，將移往溫室進行作物授粉，解決未來糧食危機。
Pyupack創造新的生態圈，來讓環境、蜂、人的品質得以提升，期許未來生態與人們能夠更加繁榮。

According to the quote from Albert Einstein "If the bee disappeared off the face of the Earth, man would only have four years left to live." Bees are closely bound up with people' s life since one-third of the crops' growth rely on bees' pollination. Recently, the arise of Colony Collapse Disorder (CCD) causes the death of bees all over the world, which leads to the imbalance of ecosystem and the ecological chain, becomes an assignable issue worldwide.
Pyupack is an environmental system designed for urban apiculture and greenhouse pollination. Solitary bees have outstanding ability in pollinating. After moving their hives into the greenhouse, we can stimulate the growth of flowering plants, increase ecological diversity, create a stable exosphere in the urban green space, and on top of all, improve the harvest of crops to solve the food crisis. Through the Pyupack project, a brand new harmonious ecosphere can be built and create a better living environment for both human and bees.

Pyupack創造出全新且穩定的城市綠地生態圈，讓環境、蜂、人的品質得以提升。
Through the Pyupack project, a brand new harmonious ecosphere can be built and create a better living environment for both human and bees.



將主蜂箱投放至城市綠地後，提供獨居蜂良好居所，並為城市中的開花植物授粉。

After the main beehive is placed in the urban green space, it provides a good residence for solitary bees and pollinates the flowering plants in the city.

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主蜂箱上的生物識別系統會辨別、記錄各個巢室的蜂種，並會註記各巢室幼蟲羽化時間，以利溫室授粉使用。

The biometric system on the main hive identifies and records the bee species in each honeycomb and notes the feathering time of the larvae in each nesting chamber for greenhouse pollination.

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透過記錄巢室數量，可以藉此推算獨居蜂環境數據，並呈現在主峰箱的介面上與網站上，提供給市民與相關機構做環境變化參考。

By recording the number of the main beehive,we can calculate the data of the solitary bees environment and present it on the main beehive interface and website to provide the public and relevant institutions with references for environmental change.

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城市中的獨居蜂在長期發展過後，逐漸達到飽和狀態。為了將多餘的授粉力做有益的使用，Pyupack將部分的獨居蜂移作溫室授粉。

The city's solitary bees gradually reach saturation after a long period of development . To make useful use of excess pollination , Pyupack moved some of the solitary bees to a greenhouse for pollination.

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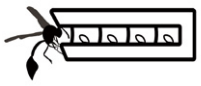

挑選開花期與生命週期相近的獨居蜂不僅能達到最高的授粉效率，同時，對短生命週期的獨居蜂而言也未有損失，他們仍在生命的每一刻，進行相同的生命週期。

Selecting solitary bees with a flowering period similar to the life cycle not only achieve the highest pollination efficiency but also has no less for the solitary bees with short life cycle,who are still carrying out the same life cycle at every moment for their lives.

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花期結束後，溫室內的作物得以授粉、收成，人類的糧食作物能有優良的收穫，同時也能向農家收取授粉費用，以維護系統營運。將副蜂箱帶回城市時，能將新生的獨居蜂帶回城市，繼續在城市綠地中繁衍。

After the end of the flowering period , crops at the greenhouse can be pollinated and harvested,so does human crops,and farmer can also be charge pollinationfees to maintain the operation of the systems,when the sub-hive is brought back to the cities, the newborn solitary bees can be brought back to the cities and continue thrive in the urban green spaces.