

德蘭中學

St. Teresa Secondary School

隊名

Team Name :

德蘭中學 — 中一及中二組
 St. Teresa Secondary School
 – S1 and S2

原型方案名稱

Prototype Name :

物聯網智能垃圾桶
 IoT Smart Trash



環境衛生

ENVIRONMENT AND HYGIENE

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九龍城街頭的違法棄置問題嚴重，大量細菌和蚊蟲因而滋生，增加市民患病的風險。有見及此，新設計的物聯網IoT功能利用Wi-Fi模組，透過網絡把垃圾桶使用數據通知管理人員，讓其即時處理。垃圾桶將安裝人體感應器和喇叭，以提醒市民違法罰款的後果。另外，垃圾桶亦會安裝距離感應器和馬達，當發現市民走近及停留垃圾桶旁時就會觸發馬達，把垃圾桶蓋自動打開，減少市民因怕骯髒而胡亂棄置垃圾的問題。當垃圾桶達到特定容量，IR感應器則會自動觸法壓縮裝置以減少其容量，再利用Wi-Fi模組把垃圾桶已滿的訊息通知附近管理員處理，從而提高社區衛生質素和減低清潔人員的負擔。

Illegal trash disposal is a serious issue in Kowloon City. Trash are disposed on the streets and around trash cans which cause hygiene problems which are left unsolved. The selfishness of people worsens the problem while people litter for their own convenience even when they see the trash can is full. Their selfishness not only burden street cleaner with hard work, but also create a huge mess of flies and mosquitoes. With fermentation of substances and chemicals in rubbish, feral animals such as cats, dogs and mice may transmit diseases to human being.

Therefore, we propose to use IoT to solve the problems brought by illegal trash disposal. For instance, IoT can transfer the digital data (data of usage) of the trash can to the admin through the Internet. When the admin receives the information, he or she can deal with the problem instantly.

