餐廳排放的油煙問題日益嚴重, 隨著電動車的發展, 在未來, 城市空氣污染源將會由烹調油煙所取代。煮食油煙由加熱過程中, 糖類、蛋白質、脂肪的降解所組成, 產生醛類，如一級致癌物甲醛。每年全球呼吸系統疾病的醫療影響高達 388 億美元。

我們的方案 - 可視化空氣污染儀表板 ARED, 採用地理信息系統及物聯網技術, 採用並分析各項的空間數據, 例如可視化三維地圖, 餐廳排放數據等。ARED 針對的四類用家(政府相關部門、大眾市民、大學及發展商)。用家透過輸入地點, 便可得出該區的油煙氣味污染狀況, 繼而了解到該區的呼吸系統健康風險, 將來更可拓展至任何建築物排放。

The problem of restaurant smoke is becoming more and more serious, and with the development of electric vehicles, in the future, the source of urban air pollution will be replaced by cooking fumes. Cooking fumes are caused by the degradation of sugars, proteins and fats during the heating process, resulting in the production of aldehydes such as formaldehyde, a class 1 carcinogen. The medical impact of respiratory disease is USD 38.8 billion per year worldwide.

Our solution, Alba Restaurant Emission Dashboard (ARED), uses ArcGIS and Internet of Things (IoT) technologies to capture and analyse spatial data, such as visual 3D maps, restaurant emission data, etc. ARED is targeted at four types of users (government departments, the general public, universities and developers). By inputting the location, users will be able to find out the fume and odour pollution status of the area, and then understand the respiratory health risk of the area, which can be extended to any building emissions in the future.