智慧城市線上展方案內容

方案名稱	臺南市智慧防汛網 Tainan City Smart Flood Control Platform
局處/類別	臺南市政府水利局/智慧防汛 Tainan City Government Water Resources Bureau/Smart Flood Control

本市易淹水面積佔全國三分之一多,近年來氣候變遷趨勢明顯,降雨強度及頻率有大幅增加的 趨勢,為提升短延時強降雨的預警與應變搶救能力,並達成災害防治決策與防救災資源之最佳化, 臺南市政府水利局將各類水情監測、相關單位災情蒐集、模擬運算資料等彙綜分析運用於智慧防汛 網。

Of all the areas that are prone to flooding in Taiwan, 1/3 of them are in Tainan City. In recent years, rainfall intensity and frequency have significantly increased due to global climate change. To optimize short time delay heavy rainfall alerts and emergency relief performance, Tainan City Government's Water Resources Bureau set up the smart flood control platform which combines water regime monitoring data, disaster status, and computer simulations for further analysis and applications. With the platform's assistance, related authorities can make better disaster prevention strategy decisions and conduct adequate distribution of disaster prevention and relief resources.

感知方面,除介接氣象局、水利署等單位提供的監測資訊外,也納入本市建置的觀測設備成果,其中淹水感測器最快於 10 分鐘可回報當地淹水水位即時資訊,作為智慧防汛災害評估的核心。

The platform receives sensor data from the Central Weather Bureau and Water Resources Agency, as well as observation sites in Tainan City. Flood sensors report local flood water levels within 10 minutes, providing crucial information for smart flood control disaster assessments.

案

構

示

預判方面,將氣象局預報降雨、淹水感測器、內政部 EMIC 災情通報資訊及水情監測資訊整合 至淹水模式內,可於 10 分鐘運算出未來一小時淹水模擬範圍,作為災害情勢及未來風險研判參 考,同時提供防救災決策、防救災資源調度及設施操作之參考,為應變爭取超前佈署的時間。

Furthermore, the platform consolidates data from the Central Weather Bureau (rainfall prediction), Ministry of the Interior (EMIC disaster status reports), flood sensors, and water regime monitors and feeds them into a flood model, which then produces a flood area simulation of the next hour in 10 minutes. The information buys more time for related authorities as these results can assist in the interpretation of disaster situations and future risks, as well as serve as reference for disaster relief schemes, disaster prevention and relief resources deployment, and equipment operations.

當移動式抽水機油料不足 30%時,立即以簡訊通知操作人員補充油料,保障抽水不間斷,降低淹水風險;而淹水感測器測得致災深度時,台南水情即時通 APP 也會主動推播各使用者作為因應,以強化本市民眾災害意識或作為疏散撤離等參考。

When the mobile pump's fuel falls below 30%, it immediately alerts operators via text message for refills. This ensures the pump can keep on running and reduce flood risks. When flood sensors detect that the water level has reached flood stage, the Tainan real-time water regime app will send out alerts to users so that the public is aware of the situation and can assess whether evacuation is necessary.