



Project Title項目標題:

The Automated Registration Management System (The ARMS)

Project Propose項目目的: (Less than 150 words少於150字)

Please outline in this section which theme (of the 3: Better Township - Energy, Water, Transportation, Recycling; Easy Access for the Disabled and Elderly; Better Health Care) you have selected, and what problem your IoT solution will solve and why you have selected it.

請在本節簡述小組選了哪個主題(三個指定主題之一: IoT優化城市: 能源, 用水, 交通及廢物回收; 適合長者及有特殊需要人士安居的家園; 提供市民優質醫療服務), 並會以物聯網解決方案解決哪種問題, 以及你選擇選擇解決這問題的理由。

Our project belongs to the Smart Workspace category. Nowadays, requiring guests to register at a counter before a meeting is a common practice for companies, but many companies, especially those located in commercial buildings, still rely heavily on inefficient, time-consuming, and repetitive manual registrations. Although some registration could be done online or through QR codes, there is not a centralized application for this registration process, requiring the use of a variety of different software. The process is usually relatively messy and could be difficult to manage. We hope to speed up the planning of meetings and ramp up productivity by providing a centralized, time-saving, and easy-to-use automatic service to replace manual registration for important meetings with clients and attendants, as well as offering a convenient interface and environment for scheduling meetings, inviting guests, allocating time slots and allocating available spaces for upcoming meetings. (143 words)

IoT Technology Activities物聯網技術活動: (Less than 300 words少於300字)

Describe how the IoT technology-based solution will contribute towards solving the project's goal and in detail, outline the technology solution. Be sure to include any special resources required to implement the project.

請描述以物聯網技術為主的解決方案將如何致力實現項目目標, 並詳細地概述技術解決方案。請務必列出實施項目所需的任何特殊資源。

The physical device, which consists of a camera attached to a tablet, will be installed in the lobby of office buildings and will be used to automatically scan and recognize the faces of registered guests, employees, clients, and people barred from entering the building.

The receptionist does not have to note each guest's details manually and guests do not have to tediously wait in line to provide their details for registration anymore - they can easily register their details on the provided screen or on their devices within clicks.

Recurring guests or clients can be recorded in the system's database and recognized in future meetings. Upon their return visit, it identifies the guest via facial recognition technology. Pre-registration can also be done online by the guests to prevent overcrowding at the reception area. Guests that have completed the online registration or have visited before will only be required to complete simple procedures such as entering a verification key and do not need to fill in their details again. Guest data from the camera and from the registration process can be collected and reported back to the host for analysis and contact of guests. Advanced security measures will be carried out such that guests' recorded information will not be leaked.

Arrival notifications in most offices are, in fact, quite time-consuming, with the receptionist trying to notify the right host while scrambling through the list of office directories. With this system, registered guests just need to search for the right host within a few clicks, and a notification alert will be sent to the host in the office automatically.

In addition, the scheduling for the meeting can also be completed on the website or mobile application. Guests can be invited and will receive a notification on their phones a set amount of time before the start of the event or meeting. The time slot and the location can be specified, though they could also be left blank. The system can allocate a time slot based on the duration of the event and the availability of different guests or hosts, and it will also detect the vacancy of rooms and automatically allocate a meeting venue on that day. The mobile application will also provide a map to guide the guests to the corresponding meeting room so the host can greet the guest there. For accessibility for all, features such as voice recognition, text-to-speech, and gesture control will also be added to aid the registration process for those with physical disabilities. (414 words)

Beneficiaries受益人群: (Less than 150 words少於150字)

Indicate beneficiaries who gain social, economic, or environmental advantage from the IoT technology solution. They may be identified in, for example, the household, the village community, or the global community.

指出物聯網技術解決方案可在社會、經濟或環境方面惠及哪些人群。例如，可惠及家庭、村莊或全球社區中的人群。

This project aims to bring more convenience to the user experience of guests upon visiting a company building and hosting meetings and events. Even nowadays, most company buildings still use the traditional way of verifying guests: the receptionist spends a long time trying to get the right details regarding the guest's visit and then calls up the receptionist on the respective floor, who will then need to notify the employee there is a guest visiting. This whole process usually takes a couple of minutes. We strongly believe that our project can speed up the essential security procedures required and at the same time, allow the company to manage different meetings effectively and efficiently. Manual registration is also avoided, which reduces the workload of guests and receptionists alike. The accessibility features also ensure that all users can be able to complete the registration process. (144 words)

YouTube 視頻: <https://youtu.be/OuwFSV8DsJU>