



Technology-based firefighting, intelligent disaster response

Integrating AI technology into the existing 119 dispatch system, the platform utilizes real-time speech recognition to transcribe callers' reports and disaster scene radio communications into text. It rapidly extracts key terms (such as "collapse," "no breathing," "major fire"), enabling the system to instantly link with the dispatch system and provide dispatch recommendations. This significantly reduces case assessment time and enhances the accuracy of case acceptance and dispatching.

The fleet system utilizes Internet of Things (IoT) technology to not only transmit real-time images and vehicle locations from disaster sites but also monitor vehicle driving data (such as sharp turns, sudden braking, etc.) and driver behavior (such as closed eyes, using a mobile phone, etc.). It promptly issues alerts and records the data on the backend platform, enhancing safety for both drivers and pedestrians, and improving road safety.

Disaster Response Cloud Collaboration Platform

Technology-based firefighting, intelligent disaster prevention

The "Disaster Response Cloud Collaboration Platform" is a three-year continuous project (2023-2025) by the Taipei city government, utilizing AI technology to build the "Typhoon and Flood Disaster Real-time Warning Analysis Module" and the "Earthquake Measurement and Disaster Loss Analysis Module." These modules will be used to predict disasters, provide key response points and warnings, assist commanders in making precise decisions, and set up a "Disaster Monitoring Dashboard" for dynamic information visualization. This will enhance disaster response efficiency, establish a backup mechanism for cloud and local systems to improve system availability, and integrate real-time video conferencing functionality and a mobile RWD interface. This aims to achieve decentralization and realize the concept of "Wherever the Mayor is, the EOC is," achieving a mobile EOC and comprehensive disaster management.

Technological Firefighting - Intelligent Consumable Management

Smart cabinets use image recognition and weight sensors to automate emergency supply tracking, reducing errors and simplifying management. Facial recognition enhances security and traceability. A real-time dashboard monitors stock, while AI predicts usage trends and alerts for better procurement, minimizing waste and shortages.



Smart & Inclusive Navigation Service for Taipei Main Station

AI-powered indoor positioning and mapping enables nationwide digital indoor maps and accessible navigation with minimal hardware and energy use. It can facilitate seamless city-wide navigation across indoor, outdoor, and multi-venue environments, improving wayfinding in complex spaces.

For Taipei, modern technology could connect key locations (transport, hospitals, malls) to bolster emergency response. During emergencies, citizens can access evacuation routes and share their location information if trapped, helping rescue teams quickly understand building structures and locate victims. Leveraging existing Wi-Fi, it could support sustainability goals. This platform is capable of tailoring a digital indoor standard for Taipei, integrating GIS data for disaster prevention, firefighting, and building management, advancing Taipei as a sustainable smart city.

Smart charging parking spaces

Smart Management: The license plate recognition system, combined with AI technology, helps vehicle owners stay informed about the latest charging status. Additionally, it can use AI-based evidence collection to identify non-compliant vehicles, ensuring that charging resources are prioritized for electric vehicles in need.

Smart Alert: A 24-hours reporting system instantly notifies fire departments and relevant authorities, enabling rapid response and maximizing every second of the golden rescue time.

Smart Guide: Taipei Parking - Charging Map integrates public and private parking and charging information across Taipei, providing citizens with real-time access to charging station availability, pricing, and status on a single platform. By reducing search time and unnecessary driving, it helps alleviate traffic congestion and creates a more convenient environment for electric vehicles in Taipei.



Taipei Arena Event Crowd Monitoring System Applied at Sun Yat-sen Memorial Hall Station

The Taipei Dome is the first large-scale indoor multi-functional stadium in the country with 40,000 seats. It is located in the Taipei Cultural and Sports Park in Xinyi District, surrounded by several city landmarks. Since its opening, it has continuously hosted numerous large-scale events, attracting large crowds and posing significant challenges to the Taipei Metro's transportation capacity. As the leader in domestic rail transportation, Taipei Metro aims to achieve smart and sustainable transportation. It has independently developed the "Transit Information Management Expert System (Metro TIMES)" and the "Metro Network Transit Display System (NTDS)," successfully shifting the management focus from congestion to comfort. For events related to the Taipei Dome, Taipei Metro plans transportation strategies in advance, sets up command centers, implements crowd diversion guidance, initiates three-level control measures, and flexibly dispatches extra trains and support personnel. These efforts effectively disperse crowds of over 40,000 people, showcasing innovative technology and excellent transportation efficiency, providing passengers with a safe and comfortable transportation experience.

Keywords: Taipei Dome, Taipei Metro, crowd control, AI Applications

Intelligent traffic signals control in Taipei city

Taipei City has developed 361 dynamic signals and 61 traffic-responsive signal intersections since 2020.

The dynamic control system uses real-time traffic data from roadside detectors and compute important traffic parameters in a very short time to send dynamic signal plans to the onsite signals. In this way, the signals could adjust green time in response to the real traffic demand to optimize the traffic flows in the control area and improve corridors travel time. The travel time of the main corridors has been reduced by 7%.

The traffic-responsive signal control system uses AI edge image recognition system to sense vehicles and pedestrians, and adjust phase split instantly. In this way, the waste time of stopped vehicles on the arterial road can be saved and pedestrian crossing intersections become safer.



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Taipei CORS: Advancing Services Through Continuous Refinement

Taipei CORS (Continuously Operating Reference System) has been in operation since 2015 and has continually enhanced its services. It provides high-precision real-time positioning, satellite data download services, online data computation, and analytical tools for Taipei City. These capabilities greatly enhance the efficiency of land development, cadastral surveying, accelerate public infrastructure projects, and ensure the consistency of the city's geodetic control system. In addition, Taipei CORS supports advanced applications across various sectors. It serves as a critical reference for policy planning and execution in areas such as land resource management, urban planning, water conservation, transportation management, agriculture, forestry, meteorology, and disaster management. By delivering precise and comprehensive geospatial data, Taipei CORS plays a key role in promoting smart governance and sustainable urban development.

AI Smart Counter - Real Time Translation Service

The AI Smart Counter showcased in this exhibition provides real-time speech translation and intelligent information retrieval, supporting 18 languages. Utilizing AI technology, it seamlessly bridges communication gaps between Chinese and foreign languages, creating a language barrier-free smart city environment. This innovation facilitates international exchange, enhances urban convenience, and improves both tourism and business interactions, ultimately driving the development of smart cities.

Project to Enhance the Service Quality of 1999 Using Real-Time Speech-to-Text Transcription and AI-Powered FAQ Integration

The Taipei City Government actively promotes AI applications by collaborating with private-sector innovations for proof of concept (PoC). In 2024, the Research, Development, and Evaluation Commission and the Department of Information Technology proposed the "Project to Enhance the Service Quality of 1999 Using Real-Time Speech-to-Text Transcription and AI-Powered FAQ Integration." This initiative was implemented over a five-month period at the 1999 Call Center to conduct on-site verification. It not only converts incoming calls into text in real-time to enhance efficiency but also integrates AI to optimize FAQ search capabilities and reduce query response times.

The results showed that the speech-to-text recognition accuracy rate was approximately 90%, and it reduced query times for less experienced agents by about 90%. Based on these findings, we plan to introduce speech-to-text technology in 2025, allowing staff to transition from the traditional practice of simultaneous listening and note-taking to focusing more on providing high-quality, citizen-centered services.



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Taipei CooC-Cloud AI smart teaching assistance platform-CooC AI

The "CooC AI System" is a brand-new, integrated AI-powered platform designed to support teaching and help students overcome learning challenges. In 2024, six major features were added and optimized, including the "AI Learning Assistant Neo," "AI Voice Listening Practice," "AI-Assisted Handwriting Review," "AI-Generated Adversarial Questioning," "Learning Packages," and a "Reward Mechanism." These enhancements make the "CooC AI System" even more aligned with the learning needs of teachers, students, and parents.

Outcomes of the Smart City Youth Governance Competition

In November and December 2024, the Department for Youth of the Taipei City Government hosted a Smart City Youth Proposal Competition, encouraging young people to harness technology to solve urban challenges and create an inclusive, sustainable, and forward-looking urban lifestyle. The event attracted 104 teams and 271 participants. Following preliminary selections, workshops, and mentorship from industry experts, 20 teams advanced to the finals for live presentations. Ultimately, the "拾原拿來" team clinched the championship with their innovative proposal. The city government and industry partners collaborated to support youth innovation and jointly promote the development of a smart city.

Smart Water Information Sharing. We Protect Your Safety.

The official LINE account for public is divided into two main sections: general information and disaster prevention features. In addition to providing users with information on riverside activities and weather, the official LINE account allows subscribers to interact with functional modules on their mobile devices to access water-related data, receive regional alert messages, and take appropriate action. It is deeply integrated with the public version of water information system, creating an intelligent mobile water monitoring assistant that helps achieve the localized management of water information.



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Visual Management Platform for Sewage Pipe Inspection and Service Life Extension

Taipei City's sewage system has been in operation for over 50 years, with a total length of approximately 2,768 kilometers. In addition to regular inspections, it has pioneered a "Visual Management Platform for Sewage Pipe Inspection and Service Life Extension".

Combining a GIS (Geographic Information System), it has pioneered a "follow-up image" function, uploading inspection videos to a database and allowing users to follow the trajectory on the GIS map to understand the internal condition of the sewage pipes under the roads.

It also automatically tracks improvement progress of inspection modification, provides an early warning mechanism, and effectively prevents disaster, improving service quality and safety.

Smart Water Services – Your Smart Water Manager

Water is essential to daily life. By integrating various municipal water services into a "single online platform," we offer a user-friendly interface that provides one-stop access to manage and enhance your water service experience. This platform assists users in managing water (bill payments, alerts for unusual water usage), managing accounts (consolidated billing, online direct debit setups), saving money (instant access to discounts), and ensuring peace of mind (water quality, construction updates, and other water-related services). Let the Taipei Water Department be your indispensable water manager, integrating into your life to provide more convenient water services.

Sports Scientific Training Center of Taipei, SSTCT

To enhance the athletic performance of Taipei's athletes, the Taipei City Government Department of Sports employs a science-driven training approach. This includes talent identification, development, and achievement, with practical applications in sports performance assessment, strength and conditioning, health management, fatigue recovery, nutrition, psychology, and technological support. As essential supporters working behind the scenes for our sports teams, sports performance coaches and sports science professionals are dedicated to providing expert support, ensuring that athletes can pursue their dreams without worry.



AI Smart Healthcare

AI-assisted diagnosis of diabetic retinopathy

Taipei City Hospital uses AI to assist in the diagnosis of diabetic retinopathy, assisting non-ophthalmologists in preliminary screening, reducing the medical workload and allowing ophthalmologists to use their time and energy on patients suffering from eye diseases.

Through the smart medical community diabetic retinopathy fundus screening program, fundus examinations and AI-assisted diagnosis are provided for diabetic patients in clinics and communities to enhance public health awareness and increase diabetic retinal screening rates, so as to achieve early detection and early treatment and reduce the harm caused by visual damage.

AI-assisted individual cardiac age prediction

Distinguishing features:

A quick ECG can predict individual cardiac age and actual function, such as the possibility of cardiac catheterization or coronary stent in the near future (3 months).