



# Smart JAMP(2021) Pre-feasibility Study on the Introduction of a Disaster and Traffic Monitoring System for the Realization of Smart City in Kuching, Malaysia

Category of Issues  
in the Area



- Target Area**
- Kuching, Sarawak, Malaysia (See Figure 1)
- Background and Purpose**
- In 2017, the Sarawak State Government made Smart City a priority strategy in its Digital Economy Strategy (2018-2022) and set the following projects as priority issues at the 2019 ASCN High Level Meeting.
    - ① Smart mobility: Digitalization by smart traffic signal system to reduce traffic congestion
    - ② Integrated flood management and response system: Ensuring the safety of residents by warning notification in the event of a flood, monitoring and response system for flash floods and inundation conditions
 Also, the utilization of blockchain technologies to improve public services is an issue to be considered.
  - The following surveys will be conducted on the above-mentioned issues.
    - 1) Monitoring system for traffic and disaster information, etc.
    - 2) Possibility of using Japanese technologies for blockchain.

- Related Organization**
- Sarawak Multimedia Authority, in charge of Smart City(SMA), Department of Irrigation & Drainage(DID), Sarawak Government in charge of security(UKPN), City of Kuching

- Project Stage**
- Pre-feasibility Study

- Contents and Results**
1. Examination of feasibility for developing and implementing disaster/traffic monitoring system
    - In Kuching City, a monitoring system (iiHydro, river/street water level sensors) for disaster (flood damage) management and a traffic volume monitoring system for signal control had been introduced. SMA expressed the need for advanced analysis such as the integration of information from related organizations and forecasting traffic data.
    - Through the study, information that should be provided to citizens for elimination of congestion and the way of obtaining the data were considered.
    - Further, it is proved that information about highly accurate traffic congestion and forecast of the congestion can be provided in real time by analyzing the Probe data.
    - Commercialization of this project, evacuation route guidance, bus arrival time estimation, and the area of logistics were considered to conduct experimental implementation, with the application to alleviate congestion around schools as the entry point.
  2. Survey on the introduction of Japanese technology regarding blockchain
    - Organized seminars about blockchain technology to understand the needs of the Kuching city. In terms of applying blockchain technologies, issues and functions of technology (token economy, digital ID, interoperability) were discussed and introduced. As a result, the following three areas were identified: (1) Land title management (2) Tax filing procedures (3) Company registration procedures.

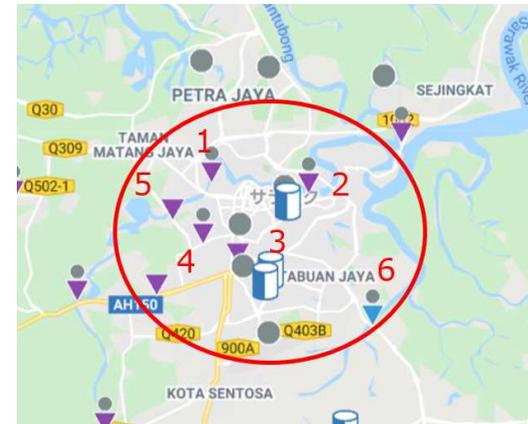


Figure 1 : Target area of the project

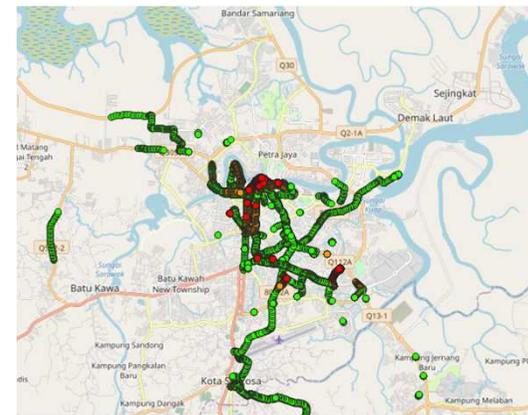


Figure 2 : Probe data plotted on the map



Figure 3 : Traffic congestion in Kuching