

# Rekomendasi Smart Transportation Untuk Ibu Kota Nusantara = Smart Transportation Recommendation For Ibu Kota Nusantara

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## Abstrak

Perencanaan pembangunan Ibu Kota Nusantara menjadi salah satu agenda penting dari pemerintah Republik Indonesia. Hal tersebut didukung dengan disahkannya Peraturan Presiden Nomor 63 Tahun 2022.

Pembangunan IKN meliputi beberapa aspek yang salah satunya adalah smart transportation. Penelitian ini bertujuan untuk memberikan rekomendasi kebutuhan teknologi dalam rancangan smart transportation untuk IKN. Rekomendasi rancangan yang diberikan berfokus pada transportasi publik berbasis bus. Penelitian ini menggunakan metode kualitatif. Instrument penelitian yang digunakan adalah wawancara dan Systematic Literature Review (SLR). Analisis data dilakukan dengan cara benchmarking terhadap pihak atau daerah atau negara yang sudah mengimplementasikan konsep smart transportation dalam sistem transportasinya. Subsistem yang dapat dikembangkan untuk menunjang smart transportation di lingkungan IKN, yaitu Smart Traffic Monitoring, Route Optimization, Accident Detection and Infrastructure Monitoring (Parking, Lights, Road Anomalies), Traffic Management System, Traffic Information System, Traffic Safety System, Smart parking, Smart Vehicle Monitoring System, Smart Road, Optimal Route Planner, Emergency Handling, Public Transit Prioritization, Adaptive TSCS, ITSCS, Passenger Information System, Smart Navigation System. . Jenis kendaraan yang dapat digunakan yaitu BEV (Battery Electric Field) dan FCEV (Fuel Cell Electric Field) dengan autonomous vehicle sebagai mode berkendaranya. Berbagai macam sensor dapat ditanam, baik di kendaraan maupun di jalan raya yang kemudian terbagi menjadi 6 kelompok, yaitu safety, diagnostic, traffic, assistant, environment, dan user. Teknologi 5G dan fiber optik dapat digunakan sebagai teknologi komunikasi di IKN.

.....Planning for the development of the Ibu Kota Nusantara is one of the important agendas of the government of the Republic of Indonesia. This is supported by the passing of Presidential Regulation Number 63 of 2022. The development of the IKN includes several aspects, one of which is smart transportation. This study aims to provide recommendations in terms of technological needs in smart transportation designs for IKN. The design recommendations given focus on bus-based public transportation. This study uses a qualitative method. The research instruments used were interviews and Systematic Literature Review (SLR). Data analysis is carried out by benchmarking against parties or regions or countries that have implemented the concept of smart mobility in their transportation system. Subsystems that can be developed to support smart transportation in the IKN environment are Smart Traffic Monitoring, Route Optimization, Accident Detection and Infrastructure Monitoring (Parking, Lights, Road Anomaly), Traffic Management System, Traffic Information System, Traffic Safety System, Smart Parking, Monitoring System Smart Vehicles, Smart Roads, Optimal Route Planner, Emergency Handling, Public Transit Priority, Adaptive TSCS, ITSCS, Passenger Information System, Smart Navigation System. The types of vehicles that can be used are BEV (Battery Electric Field) and FCEV (Fuel Cell Electric Field) with autonomous vehicle driving modes. Various kinds of sensors can be planted, both in vehicles and on the road which are then divided into 6 groups, namely safety, diagnostic, traffic, assistant, environment, and user. 5G and fibre

optic technology can be used as communication technology in IKN.