The Implementation Model of Smart Logistic Transport: Engineering Economic Analysis of Internet of Things (IoT)

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Abstract
Asean Economic Community 2016 has been creating more challenges in logistics industries in Indonesia. The implementation of IoT (Internet of Things) in logistic services is needed for increasing competitiveness leading to the establishment of so-called smart logistic transport. We propose the implementation model of the Indonesian Smart Logistic Transport, by focusing on cold supply chain system. We have conducted an engineering economic analysis of the smart logistics transport, in relation with the mobile network platform of 2G, 3G, 4G. Development of the implementation model is completed by conducting in-depth interviews with the application customers, technological vendors, regulator and network provider. Based on implementation trial in September-October 2015 and engineering economic analysis, we have found that Smart Logistic Transport is not feasible only on scenario 3 for CD6 at 4G network. Such condition is caused by the expensive price of 4Gs M2M gateway module and MDVR. Therefore, it requires the minimum amount of implemented truck to make implementation feasible. Our proposed model has signified 11 features, i.e. 2 basic feature and 9 advanced features, formulating the Indonesian smart logistics transport system. Due to the dynamic business process, customers may need specific advanced features in the future. By taking such opportunity, Indonesian local content developer can work to develop any relevant application features, which is needed by the logistic companies in the near future.

Keywords
Logistic Services, Engineering Economic, Supply Chain, Internet of Things (IoT), 4G Network

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Biography
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