ABSTRACT

In realizing a sustainable smart city, a smart building concept is needed that can support energy efficiency and maintain the security and comfort level of residents/employee. One of the buildings form that uses the large of energy is office buildings, therefore office buildings must be managed intelligently or become smart offices.

Smart building research has been done before by Indrawati, Yuliastri, Amani [1] (2017) who have found variables and indicators, also formed a model to measure smart building. However, this model has not been tested to measure the building as a smart office.

This study aims to confirm and modify the variables and indicators used to measure smart office obtained from existing models, from the literature and also opinions from respondents who came from expertise, building management and also users of the smart office building. To calculate this, the approach used is the sequential exploratory mix method research method.

This study found 7 variables, namely the Office Building Automation System, Office Building Control System, Energy Management System, Safety & Security Management System, Enterprise Management System, IT Network Connectivity and Green Building Construction. From these variables there are 22 indicators from existing model and 2 new indicators are added along with the interview process. These variables and indicators are used to measure whether the TSO building has implemented the smart office concept from a user perspective.

For the confirmed and modified models, the TSO index level has also been calculated and produces a performance index of 85.92 which is in the good category.

Even though it was considered good, the author suggested that building owner can improve the smart elevator system and HVAC system on the TSO because the two indicators received poorer design.

Furthermore, the next researcher is expected to be able to find a solution to the problems found previously, namely the implementation of better smart elevators and the implementation of a real-time HVAC system. It is also expected that further research will continue to develop and modify existing models in smart offices in newer built office buildings and adopt more advanced technology.

Keywords: *Smart Office, Smart Building, Smart Office Index*