

Title

The Implementation of Smart Asset Management System to Monitor the Health Index of Power Distribution Assets: Case Study of PLN's EAM in Indonesia

Dimas Bangun Fiddiansyah¹ Job Syam²

¹Engineer of Asset Management in T&D, Operation Division, PLN Head Office

²Manager of IT Development, IT System Division, PLN Head Office
Jakarta, Indonesia

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Abstract

Asset management maintenance that combines the principles of conditions based and predictive maintenance, is depend on the maturity level of assets development. Hence, the basis of the combination is the requirement to have an optimal management, in order to maintain power distribution assets that have high operational rates. The EAM platform which is proposed by PLN (electricity state company) is a centralized application that would organize the distribution assets, to ensure their lifetimes meet with the optimum technical performance. Currently, local applications are applying decentralized in each PLN unit, so there is no uniform platform that unites the whole assets in one single corporate platform. In addition, the local applications are not yet integrate with the other corporate application. So, there are barriers; to monitor assets centralized, and to develop a big data for registered assets.

Using single platform, business process standardization, and centralized asset register can be initiated, which will be integrated with the GIS function capability and SCADA, in order to create smart monitoring of distribution assets. The first project, Dreamap, has initially launched by PLN in Bali since 2014. Implementing this platform, it showed the improvement in KPI outputs, such as; losses, energy sales, SAIDI, and SAIFI.

The success of dreamap has led PLN to initiate MaximoTM which is a customized platform that has function; to accomodate asset register, and to assess health index. Hence, it is capable to be integrated with the other application, and accomodate core functions in distribution guidelines. Its mobile application is implemented to do work orders. In addition, it also assists to new customer's connection and data asset collection. Thus, it eases the personnel to do the condition assessment, so the health index of distribution lines and transformers can be evaluated. Consequently, the EAM program has been rolled out since June 2019, which involved across PLN units in Indonesia.

note: This document will be opened to the participants on IERE website before the Forum and opened to the public afterward.