

## Maintenance Work Order Management Tool (Desktop & Mobile Solution)

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**Abstract :** Oman Electricity Transmission Company (OETC) has implemented Computerized Maintenance Management System (CMMS), which is based on Oracle enterprise asset management model e-AM. This was implemented with cooperation of Nama Shared Services (NSS). CMMS is mainly used to create maintenance work orders with a preconfigured workflow of defined maintenance schedules/plans, required resources, and materials, obtaining shutdown approvals, completing maintenance activities, and closing the work orders. Furthermore, CMMS is also configured with asset failure classifications, asset hierarchy, asset maintenance activities, integration with spare inventories, etc. Since the year 2017, site engineer is working on CMMS by filling-in manually all related maintenance and inspection records on paper forms and then scanning and attaching it in CMMS for further analysis. Site engineer will finalize all paper works at site and then goes back to office to scan and attach it to work order in CMMS. This creates sub tasks for site engineer and makes it very difficult and lengthy process. Also, there is a significant risk for missing or deleted important fields on the paper due to usage of pen to fill the paper. In addition to that, site engineer may take time and days working outside of the office. therefore, OETC has decided to digitize these inspection and maintenance forms in one platform in CMMS, and it can be opened with both functionalities online and offline. The ArcGIS product formats or web-enabled solutions which has ability to access from mobile and desktop devices via arc map modules will be used too. The purpose of interlinking is to setup for maintenance and inspection forms to work orders in e-AM, which the site engineer has daily interactions with. This ArcGIS environment or tool is designed to link with e-AM, so when site engineer opens this application from the site and a window will take him through same ArcGIS. This window opens the maintenance forms and shows the required fields to fill-in and save the work through his mobile application. After saving his work with the availability of network (Off/In) line, notification will trigger to his line manager to review and take further actions (approve/reject/request more information). In this function, the user can see the assigned work orders to his departments as well as chart of all work orders with status. The approver has ability to see the statistics of all work.

**Keywords :** e-AM, GIS, CMMS, integration

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