

## **Case: Machine Planned Maintenance System**

### **BACKGROUND**

**Client:** *Singapore based maritime company, managing ships.*

Maritime companies' major equipments/assets are Vessels/Ships. These ships are like plants in a manufacturing unit, which needs constant maintenance like oiling, greasing, cleaning, routine check-ups, spare part inventory, reporting, etc.. Basically daily/weekly/monthly/Annual logs & reports are kept to facilitate the entire vessels physical & mechanical maintenance.

### **CHALLENGE**

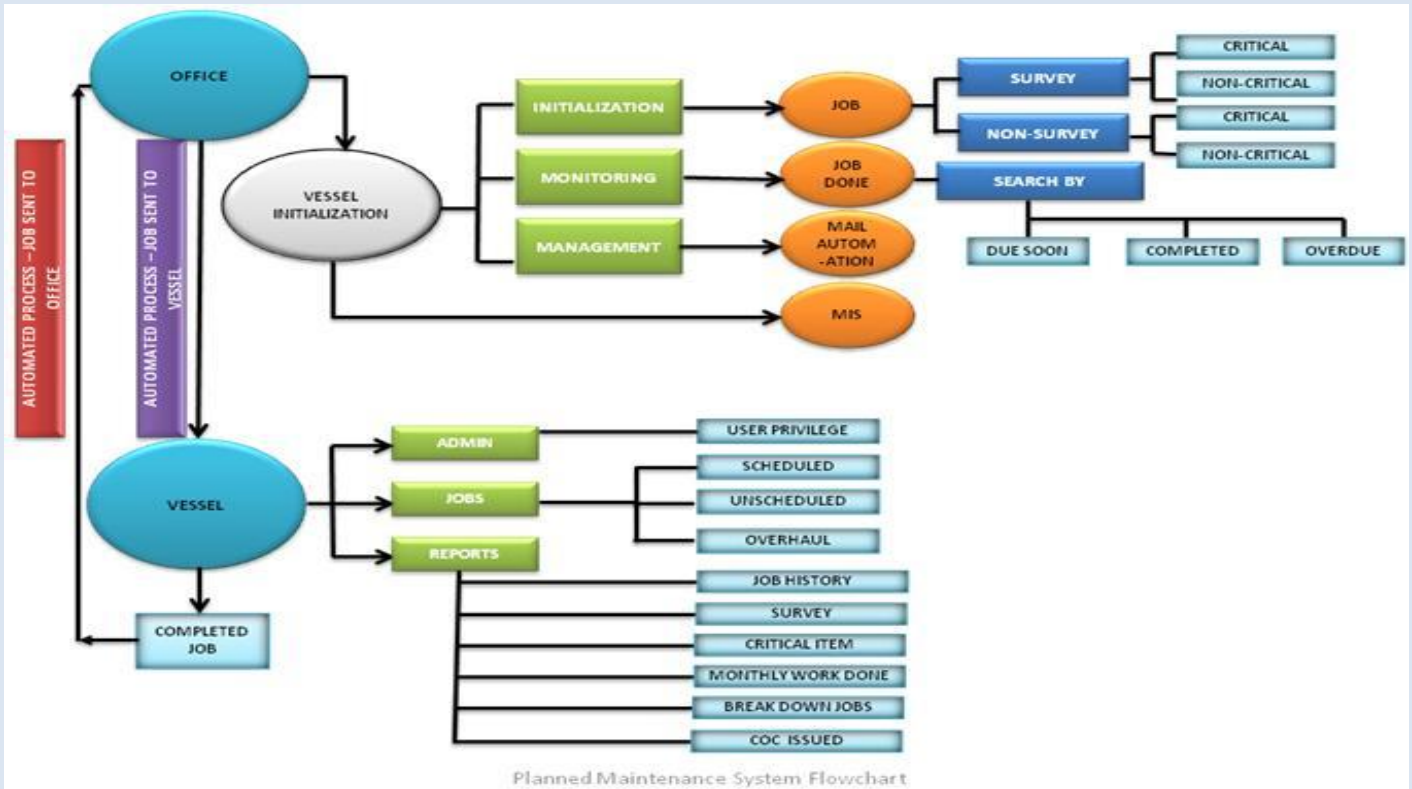
1. Difficulty in keeping track of the entire necessary preventive actions from the logs.
2. Inventory or stock levels were not easy to maintain
3. Advance spare parts ordering was virtually impossible
4. Streamlining purchases & monitoring them were a painstaking task
5. Analysis of present-past maintenance activity to check efficiency was difficult
6. Planning & daily job updates between land office & vessel was nearly absent.

### **RESPONSE**

ESQUIRE INFOLAB SYSTEMS has designed and developed an intelligent application called MPMS(Machine Planned Maintenance System) using .Net with SQL Server 2008 / SQLite for both WEB & WINDOW(Standalone) applications to run in a LAN as well as INTERNET environment, with local &/ centralized databases.

\*This system has the ability to migrate updates from vessels & integrate the data to the central server without any human intervention. (Moreover, updates get converted into an XML files which are further zipped to make file size very small (e.g. 8kb) and can be sent through low satellite bandwidths.)

### **\*AUTOMATION**



## OUTCOME

1. No human intervention is reqd. to integrate data between vessel & office.
2. Effective Planning for Preventive Maintenance
3. Exhaustive log files that keep track of all maintenance records can be viewed for instant perusal and reference
4. The inventory for all the spare parts can be controlled by defining the minimum and the maximum levels of the stock.
5. In an office based model, the history of the maintenance details of all the vessels can be Shared
6. At any given time, the Chief Engineer can view the status of maintenance, spare parts and all components of equipment in order to enable him to carry out advance planning
7. The system also keeps track of all the purchases that have been made
8. Auto-alerts help take preventive repairs, stock levels & critical breakdown rectification on calendar or running hour basis, i.e. prescribed period of use of any equipment
9. Compliance with International Safety Management(ISM) code was taken care of, which has become mandatory for all kinds of maritime vessels since 1<sup>st</sup> July 2002.

## SCOPE

This application can be universally implemented in any Shipping/Maritime organization. It has been thoroughly designed & developed to cater to the MIS needs of vessel maintenance of Ship Managers & Operators around the globe.