Improving Efficiency and Control with Electronic Shift Logs

Overview

Business Challenge

Managing the flow of instructions, shift logs and key performance indicators between shift teams and day teams.

Improving the visibility and timeliness of Key Performance Indicators across the site.

Improving accountability for performance within the operations teams.

The Solution

FoCul developed and deployed a secure Lotus Notes Manufacturing Information Application incorporating :

Shift logs
Down time reporting
OEE
Production plans
Reporting dashboard

Key Benefits

- Significantly improved visibility of operational performance across the whole organisation.
- Improved collaboration between teams.
- Improved OEE recording using data from the actual time of loss.
- Improved efficiency.

As part of a significant business restructuring initiative a multinational chemical producer needed to make significant step change in the management of key performance indicators and other operational data generated by the operations shift teams.

FoCul developed a Manufacturing Information System which allowed the plant operators to use electronic shift logs to capture their observations and data. The logs from the individual operating units are automatically consolidated into team logs and then ultimately a shift log. The individual operators, team leaders and shift manager each sign for their logs using secure credentials.

The information collected from the different production areas is then consolidated through a series of on-screen reports. The top level report is displayed as a colour coded dashboard showing progress against target for the last 24 hours, week to date , month to date and year to date for HSE, production, stocks and OEE.

The system has extensive functionality to export data to Excel where it can be automatically manipulated and graphed. This functionality is used to produce OEE data from the loss time reports recorded in the shift logs. Data from the system is also exported to other business systems such as the FoCul developed Energy Reporting Application which uses the production volumes in calculating the site energy efficiency.

> *"The Manufacturing Information System' has become the back bone of our operational communications.*
>
> *The automatic dashboard report sets the mood of the whole site in terms HSEQ and Production performance and requires no additional effort to collate. In our Lean Manufacturing environment, we couldn't function effectively without it !*
>
> *FoCul built in flexibility at the concept design stages that has allowed ongoing modifications to adapt to changing demands with minimal effort"*
>
> Operations Manager

Key Features

- The production plan is formally communicated to the production teams via the application.
- Individual operating units report performance.
- The performance of each operating unit is combined to show performance by team and across the site.
- The performance data is summarised on a colour coded dashboard comparing actual performance with planned performance.
- Historical data can easily be viewed by shift and downloaded into Excel
- OEE data is based on downtime records entered by the plant operators at the time of the lost production.

Technical Specs

- Compatible with Notes 5,6,7 and 8.
- Uses open standards to share data with other systems.

Manufacturing Information Processes

The process described here has been tailored for this client. Other organisations have used different processes.

- **Individual Operating Unit Logs**
  Each individual operating unit (an area within a plant) has a dedicated log. These logs collect information on production, tank readings, energy usage, maintenance tasks and downtime.

  The logs are designed such that the operators must account for all lost production by filling in downtime records for any shortfall. Ensuring that these records are created at the time means that the OEE data produced later on is much more meaningful.
- **Team Leader Logs**
  Selected information in the operating unit logs is consolidated into team leader logs. In signing the team leader log the team Leader takes accountability for the operating unit logs of his team members.
- **Shift Manager Logs**
  Selected information from the team leader logs is consolidated into the shift manager log. In signing off the shift managers log the shift manager takes accountability for the quality of the other logs on that shift. The shift manager also adds some further information to their log such as noise surveys and notes for the day team.
- **Operating Instructions**
  The Operations Manager uses the system to formally communicate the operating instructions / production plan to the shift teams.

  All of the historical production plans are visible to everyone on the site.
- **Batch Logs**
  The application also allows the Operations Team to record batch logs for process cleans etc.
- **IEMP Logs**
  The instrument, electrical and mechanical technicians also have logs in the system.
- **KPI Dashboard**
  The KPI screen is key to the system and is the entry point to the application.

  It uses a colour coded dashboard to show how performance on the site compares with targets for HSE, Production , Stocks and OEE.

About FoCul

FoCul is an Advanced IBM Business Partner specialising in the development and delivery of pragmatic, robust and effective collaboration tools for industry.

Our dual experience as Professional Engineers and IT Professionals allows us to develop systems that are not only very effective but also good value for money.

We can provide bespoke or off the shelf applications and these can be rented or bought out right.

We can host the applications for you if required in either Lotus Notes or on the web.

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