ELECTRONIC SHIFT OPERATIONS MANAGEMENT SYSTEM

ABB Ability™ Asset Suite eSOMS
Work optimisation for power generation.
A consistent, organised, and integrated approach to plant operations

Industry challenges

The global generation mix is rapidly shifting, with renewable energy playing a growing role. Nuclear and conventional power plants are increasingly required to operate flexibly – something that they were never designed to do.

Operational and maintenance activities traditionally designed for continuous operation at full load have to be adapted to this new operating environment. Fast ramping and cyclic loads put different stresses on equipment, demanding a different maintenance strategy, one with more extensive inspections, detailed records, and comprehensive analysis to catch problems before they occur.

The solution

Asset Suite eSOMS (Electronic Shift Operations Management System) aims to provide a consistent, organised, and integrated approach to plant operations that affect equipment configuration, system status and plant operation. Its modular design allows for quick implementation, whilst providing the flexibility to grow the solution with your future needs.

Asset Suite eSOMS can be easily adapted to your specific operational procedures and business processes. It can be deployed enterprise-wide to ensure alignment across all sites in your organisation, whilst maintaining the ability to keep specific functions, such as user authority, rounds and logs definition, at a facility level.
Modular and mobile-enabled

Asset Suite eSOMS’ modular design allows for maximum flexibility when automating and integrating all major processes in facility operations management. Data sharing and built-in interfaces between each module facilitate the integration of many operations-related tasks, whilst significantly reducing the amount of data entry required.

Additionally, Asset Suite eSOMS offers mobile capabilities designed to:

- Enable data capture at the point of work, providing plant managers with near-real-time updates to plant activities and conditions
- Automate the collection of data when possible to reduce manual entry, improving data accuracy
- Improve the depth of information captured – data can include not just text, but also images, audio and video
- Eliminate the need for paper-based procedures, tagouts, rounds and log sheets in the field

Supported mobile operating systems include:

- Google® Android™
- Apple® iOS™
- Microsoft® Windows® Mobile

Benefits

Benefits of Asset Suite eSOMS include:

- Significant and measurable gains in efficiency, productivity and safety in operations
- Reduced time and cost for operational and maintenance activities
- Enterprise-wide standardised procedures and framework that applies industry best practices and benchmarks across multiple plants
- Adherence to regulatory standards and streamlined compliance reporting
Everything you need and more

Clearances
- Assists in implementing, controlling and executing lockout/tagout procedures, no matter how simple or complex
- Sophisticated clearance management tools to manage day-to-day preparation, storage, retrieval, execution and revision of tagouts

Lineups
- Maintains a live model of the actual status and condition of the plant and equipment
- Automates and tracks configuration activities associated with plant procedures, and alerts operators to any potential conflicts

AutoPrint
- Document management tool to automate the process of creating, transmitting and tracking critical operations documents

Limited Condition of Operation (LCO) Tracking
- Quickly identify, schedule and track required regulatory and administrative actions against plant-specific LCOs
- Provides the flexibility to integrate compliance requirements from a diverse spectrum of reference documents

Narrative Logs
- Electronic journal for staff to record and qualify events that occur during their shift watch
- Tracks shift staffing, plant operating parameters, log entries, associated qualifying data and web/document links on an individual plant unit and/or staff position basis
- Automatically capture events from other modules as log entries to reduce manual data entry and improve record accuracy

Notice of Change (NoC)
- Manages the NoC process lifecycle, including the preparation, distribution, delivery, access, acknowledgment and maintenance of change notices

Administration
- Tools for the system administrator to manage users and their security rights, requirements, qualifications, module preferences and mobile device licenses
**Operator Rounds**
- Automates the tasks of collecting, computing and storing data from routine plant inspections
- Powerful data management tools for reporting, trending and statistical analysis

**Tracking and Control**
- Provides tracking and control of temporarily-positioned items to ensure correct operation or condition

**Personnel, Qualification & Scheduling**
- Flexible shift scheduling and personnel-qualification tracking mechanism
- Capture shift requirements, shift position qualifications, crew makeup, man-hours on a per-person or per-shift basis, shift rotation changes, and a host of other information for maintaining an efficient and effective plant staff
- Help prevent excessive overtime and maintain compliance with 10CFR26, Subpart I Nuclear Fatigue Rule (NFR)

**Equipment**
- Assists in the definition and implementation of a consistent, organised equipment identification system
- Quickly access and validate all equipment nameplate data, related documents, and operation and configuration history from any other module

**Mobile Rounds**
- Access historical inspection records
- Capture multiple readings per record
- Automatic limit checking and alerts

**Mobile Logbook**
- Quickly and easily review and create log entries, and add attachments and annotations

**Mobile Maintenance**
- Automates signing on/off as tagout holders and/or work order holders

**Abbreviations**
- eSOMS: ELECTRONIC SHIFT OPERATIONS MANAGEMENT SYSTEM
- ABB ABILITY™ ASSET SUITE eSOMS
Performance highlights

Below are examples of results that Asset Suite eSOMS customers have achieved:

**Power generation**
- Decreased duration of major plant outages by **1 week**
- Estimated **savings of US$3-5 million** in replacement power costs alone

**Chemical, oil & gas**
- Equipment, Operator Rounds, Narrative Logs and Notice of Change modules helped create a **consistent framework** for plant operations across its fleet of production facilities
- Estimated **savings of US$3-5 million** in O&M costs

**Military**
- **94% decrease** in the total number of tags required to be processed during a 14-month major asset overhaul
- Estimated **savings of US$4-6 million** in man-hours
ABB Ability Asset Suite eSOMS
Transform your plant operations with ABB’s integrated and mobile-enabled solution