Manufacturers are stepping up investments in their plant’s IT infrastructure due to an increasingly competitive global market. The business’ goals are demanding more from production and as such the availability and reliability of assets is evermore mission critical (as indicated in ISO 55000).

With a holistic approach to maintenance that involves managing both reliability and risk assessment across an entire organization the efficiency of each plant can be optimized increasing productivity and ultimately profitability. Without a doubt, the definition of maintenance plans is an important activity in a company with the importance of the plan scaled by two factors: first, the size of the company and the availability of its financial and labor resources and secondly, the company objectives in which maintenance plays a part. One of the key resources in maintenance is the information system and software tool used.

Hyla Soft “Smart Asset Manager” (SAM) focuses on manufacturers’ critical needs: standardization, organization of assets and traceability of maintenance activities.

Hyla Soft Smart Asset Manager is a Web-Based (HTML5) modular software package available on PC workstations, HMI devices and tablets for either for Android or IOS. Functionally, it is composed of synergic modules cooperating to create a tailored package for individual maintenance needs. All together these modules offer a complete vertical solution for any global manufacturer.

In particular SAM:

CLASSIFIES assets into categories and organizes the related documentation, reducing the time needed to create and reference important information at the plant and corporate level.

SUPPORTS maintenance departments within the plants to perform their jobs more effectively.

HELPS maintenance operators to work in a better way. With all the needed information at their fingertips they can focus on the task at hand.

TRACKS all activities for each maintenance task related to the assets.

ASSISTS planning of future activity. Knowing when machines are likely to breakdown and the costs of those failures, technicians can make smart decisions on when to plan maintenance.

SAM is:

- Multisite-oriented with corporate driven templates distributed to local sites. SAM is capable of standardizing maintenance across several plants. This offers the possibility to globally analyze the impact at the corporate level and do cross-site comparisons.
- Full translation and internationalization for the plant. Native language support included for English, Italian, Spanish and Chinese.

**Improve Availability and Reliability of your system with SAM**

**Asset Management**

SAM can manage different kind of maintenance targets: Production Machines, Facilities (buildings, structures, etc.), Auxiliaries (heaters, refrigerators, pipes, etc.). The maintenance targets are organized in a hierarchical tree view. These assets can be instantiated from a corporate template and fine-tuned for local configurations. Machines are classified depending on their importance in the
process and these different categories can follow their own configurable escalation procedure: SAM has implemented in fact an automatic escalation mechanism, through e-mails and SMS/Text to previously identified operators.

**Planned Maintenance**

SAM can inspect and correct incipient failures either before they occur or before they can turn into major defects. To do this, the maintenance administrators can create a preventive Plan Template applicable to all machines in the plant belonging to the same machine model. The preventive Plan Template, consisting of both macro and micro tasks, has attributes like the specific sub-assemblies of the machine to inspect, the tools to be used, and work-instructions. Finally, the maintenance plan is instantiated in Gantt charts where it is possible to schedule all activities. The system guides the operator to follow the correct priority of the maintenance tasks.

**Condition Based Maintenance**

Condition based maintenance is triggered by measurements and events from the shop floor (SCADA) such as: measurements of noise, vibrations, temperature, pressure and machines cycles. According to the values received, SAM calculates the number of times a constraint is violated automatically creating a maintenance task. Maintenance tasks created in this way, are visible in a Gantt chart letting the user schedule them in relation to other activities.

**Corrective Maintenance**

Corrective maintenance is carried out after a failure is detected and aims to restore an asset to a condition in which it can perform its intended functions. The shop floor (SCADA) sends an alarm to SAM which automatically creates a Breakdown Order Request. Depending on the importance of the asset, it is possible to configure an escalation mechanism which sends emails and SMS messages to the people previously identified. The operator, using an interface optimized for tablets, selects the activity to perform, changes the maintenance target if needed and selects the spare parts recording their barcodes. The system will automatically suggest correct spare parts based on previous related maintenance. Using a tablet allows the technician to upload photos of the failure and record audio messages in mp3 format.

**Spare Part Management**

Spare parts are booked by the operator. For every selected spare part, the system activates:
- A Delta Alignment keeping the spare part availability aligned with the stock in ERP;
- A consistency check confirming that the total of booked spare parts across all the maintenance activities in the plant is not greater than the number in stock.

Once the operator has chosen the needed spare part, the system is able to automatically send an e-mail to the warehouse operator. Being SAM flexible and highly configurable, the maintenance operator can consume spare parts directly in ERP. The system is able to constantly monitor the usage of spare parts when executing a maintenance task including associated costs, to actualize the stock and to send alarms in case the quantity remaining of a specific spare part reaches a critical threshold.
Cost Management

The maintenance cost is calculated according to maintenance duration and to the usage of spare parts. Interventions are assigned to operators, machines and to a cost center. The operators can be internal or external and work individually or as a group on a case-by-case basis. The cost of the personnel and spare parts used in the intervention can be extracted directly from the ERP.

KPI & Reporting

SAM calculates and presents the most important maintenance KPIs out of the box, like Mean Time Between Failures - MTBF, Achieved Availability - MTBM / (MTBM + MTTR).
Together with these and other KPIs, SAM measures reliability, maintainability, availability, resource effort and cost. Reports are available in Microsoft Reporting Services, Excel and PDF.
Example of some reports:
- Maintenance activity
- Scheduled maintenance for the week
- Maintenance global cost
- Spare part availability
- Spare part cost

About Hyla Soft

A global company, able to draw on the resources of highly skilled technical consultants, Hyla Soft delivers top-of-the-line solutions and products to clients across industries worldwide. With a focus on the business of manufacturing, Hyla Soft provides technology solutions, end to end, across diverse industry sectors including Automotive, Aerospace, Machining, Food & Beverage, Oil & Gas, Life Sciences, Healthcare and Government.

Hyla Soft is part of an international group with more than 600 active references in Italy (based in Genoa, HQ and branches in Turin and Naples) and in the international markets through our locations in Madrid (Spain), Chicago, Detroit and Portsmouth (USA), Sao Paulo and Belo Horizonte (Brazil).