SOLEIL: from a Maintenance Management System Towards a Maintenance Policy

Helène ROZELOT, Y.M. Abiven, S. Blanchandain, J. Chabard, C. Herbeaux, P. Prigent

At SOLEIL it is necessary to ensure optimal operating condition because the equipment is becoming older and older. In the maintenance management system, two main difficulties have been pointed out: the weakness of preventive maintenance and the lack of a general maintenance policy which results in a fragmented view of the failures. Therefore the top management has recently decided to undertake concrete actions that could be shared in the whole Synchrotron Facility in order to improve the maintenance management.

ORGANISATION

At SOLEIL there is not a unique maintenance service. Each group, in charge of its own equipment, is responsible for the management of its own assets. Each group has its own working methods: corrective maintenance, or preventive maintenance (process sheets for regulatory control), even Failure Mode Effects Analysis (Building & Infrastructures Group). Each group imputes its interventions into one of the several software tools available: CMMS, Bug tracker (JIRA), Electronic Logbook...

This information is then reported and analysed by a “coordination level” (Executive Coordinators & Operation Group for the Accelerator Department; Coordination Group for the Scientific Department) which has the overall view of the operation and failures and therefore of the maintenance activities to be carried out. This coordination level extracts operating indicators and verifies that all lights are green. Then the coordinators define priorities (taking into account the Beam Schedule with shutdowns) in accordance with the strategic lines defined by Top Management. All these actions of data analyses and coordination give rise to many meetings.

MAINTENANCE INFORMATION SYSTEM

This section gives examples of the various data provided by the software tools to ensure the maintenance of end to end service (from accelerators to beamlines).

In order to facilitate the overall view of the operation, we make the effort to correlate the information between each database / software : CMMS, Configuration DB (TANGO control system), Documentation Database (MERIDIAN), Electronic Logbook...

These interfaces are carried out in all the fields of activities.

IMPROVEMENTS

In order to improve the management system and to increase performance, a solution would be to define a global maintenance policy for the whole facility. We are at the beginning of the process.

This policy would mainly consist in defining strategic priorities (preventive maintenance, subcontracting strategy, etc.) and defining common methods and common tools shared by all. Among them: the single online portal (for the service management) and the criticality matrix which allows us to identify critical equipment and actions to be carried on.

This maintenance policy is supported by the new SOLEIL organisation with clusters (in scientific department) and Quality Unit.

The implementation of a maintenance policy will allow us to improve the specification of processes, organisation and methods, contributing to the excellence of the facility. As soon as this maintenance policy will be well established for the whole synchrotron, it would be useful to integrate the maintenance issues at the very beginning of the « Upgrade » Project.