Manual: 1.2. Organization

We highly recommend forming a project management team for the purpose of introducing advanced analytics software into your organization. As introduced above, this project will require a variety of technical and managerial roles to participate and the project requires a number of decisions to be made that will require these roles to agree.

The project should have a project manager who takes responsibility for getting all the work done and who has the authority to instruct the project team members to provide their respective inputs. The project can be managed by KPIs that the software provides such as the number of good optimization suggestions, the number of such suggestions actually implemented, the accuracy of the models and so on.

The phases of the project were introduced above. Phases 1 and 5 are dominated by IT and will need cooperation from that department. Phase 3 is mainly a task for the administrator of the data historian and may involve cooperation from the IT department.

Phases 2 and 4 will require deep process knowledge and understanding. We recommend conducting phase 2 as a workshop attended by process managers, engineers and operators. These persons can then discuss in detail the information required (described in the chapter on know-how). Phase 4 is the assessment of model goodness of fit and fine-tuning in case the goodness needs to be improved. We recommend that this step be done by one process expert. Generally every process expert has a personal philosophy of how everything works and this philosophy will guide this person in tuning the model(s). This person must be given sufficient time in order to carry out this task with sufficient attention to detail. This phase is the critical step in getting the software configured correctly. Mistakes and ommissions made earlier can be corrected here. Mistakes made in this phase will lead to problems down the road.

Phase 6 is the phase of change management in which the model(s) will be introduced into the everyday activities of the plant. This may require changing policies and procedures and getting appropriate management buy-in. It will definitely require convincing the operators to adopt and trust the model(s). To be useful, the software output should trigger some form of human activity. In the case of APO, suggestions must be implemented. In the case of IHM, alarms must be checked out and, possibly, maintenance measures conducted. Management as well as operators must discuss and agree on the procedures to be followed. This phase is the critical step in getting the software to be useful. We recommend that the process of user adoption be measured using objective numerical KPIs such as the number of suggestions implemented (APO) or alarms dealt with (IHM).

The entire process can be reasonably completed in three months. We recommend that the project team aim at a similar time-frame as experience has shown that project satisfaction and user adoption decreases with significantly longer project durations.