CHAPTER V
CONCLUSION & RECOMMENDATION

5.1 *Conclusion*

From this case, it clearly demonstrates that the prime feature of using KPI in reliability management is; the strategic activities and their linkages are visibly illustrated and aligned to all stakeholders, and they could be able to focus on the critical area in advance without losing overall performance. The case also shows practice of integrating performance management for sustaining reliability management process, which certainly is useful for set up other systems in the future.

The most confusing part of performance measurement is *KPI development stage.* Even deliverables or outputs are clearly defined; it would take time and effort to be creative and initiate good metrics unless there are some examples used in industry standards. KPI effectiveness test might be useful to determine if it is good metric, but in many cases, people do not wait for evaluation the KPI to be done. They just do "fine-tune" correction or adapt it to fit the process control later.

Nonetheless, since author has been involved in development of reliability management for over 3 years and dealt with this project, there are some concerns on several issues that could be improved about performance management in ORMS.

Organization & Management Roles

Functional organization has several barriers to promote team-based working culture. NPC had been failed once on setting up SDWT in the past because of lack of key personnel from another department. This time, the organization has been changed to production-based which include production support divisions; maintenance and process technologists, to the operation. Therefore, production managers can direct and control ORMS activities by their own and make implementation much smoother.

Management Roles

Since ORMS (and most of strategy deployment) is clearly "top-down" process, it is not just set up the team and wait them to "bottom-up" initiate some improvements. Setting up SDWT required patience, since it is difficult to identify direct outcome in early stage. It takes quite some time to develop relationship and trust in the team. Once the team rolls, management need to continue support and keep them rolling, or the team will fade away. That's why performance measurement is a great tool for keeping the team roll on track.

Supported IT system

Performance management is routine process, and it takes a lot of time to prepare KPI every month. Therefore IT system could play big roles in this part. Modern IT system can collects data, makes KPI reports, and allows teams to query specific information for their works, which might be unable (or very difficult) to do by hand. Ability to collaborate works without waiting prior process to finish allows changing in work processes to improve efficiency. IT also enables effective ways to communicate in teams and makes them focus in the same goal.

Personnel Competency

Though SDWT is able to share and develop competency by themselves, they have some limitation. Since SDWT is not only deal with technical problems on production, but also need to take care of their team-building issues as well. Managements need to observe and empower the team in both technical knowledge and management skills to get through the problems.

Finally, though performance measurement concept is widely recognized, asset management and reliability management are only applied in specific capital-based industry. This study illustrates real life application and can be used as reference for further study in related topics.

5.2 *Recommendations*

To help ORMS implementation in the future, there are pre-cautions and practices for implementing ORMS and SDWT, included issues that stated previously, suggested as follow;

- Management support for ORMS is crucial. It is necessary to make sure that top management understand the concept and willing to sponsor the activities. Also, the management should be constantly reported about team progress and their outcomes.

- The most difficult period for SDWT is the first year, since the team gets pressured from management whom expect the outcome while they are still learning to work together as team. It is recommended to pick some "Quick-Win" easy, well-known problems to solve first. So this could make SDWT be recognized and motivate the management to keep their support on the team.

- Communication is the key for SDWT success. Therefore it is priority for attending the meeting. Team members need to realize that SDWT is part of work, not additional work.

- Arranging presentation to top management occasionally, that would help top management recognize and understand the team. This also make the team motivates themselves to improve their works.

- Steering team needs to thoroughly understand ORMS process and develop "Competency Mapping" to illustrate correlation between skills and knowledge required, and job roles in the team. The competency mapping would be used for

develop training plan to ensure that team members are able to perform their roles as required.

- Since corporate strategy would change over time, then, KPI needs to be reviewed periodically as well. The target should be updated with new business objectives, and the leading KPI should be revised with new strategies.

- Networking in the same industry would help develop KPI much more effective. Information from benchmarking is useful for identifying gaps for improvement.

- To use IT solution effectively. There are several modern IT solutions for reliability management available in market currently. Some IT solutions allow company to be able to change the whole working processes. It is recommended to integrated reliability data, maintenance work processing records, and other KPI data to common database in ERP (especially SAP) and develop solution for automatically create KPI report. So the report would be generated consistently without relying on someone. Other examples for IT application in reliability management are enhancing communication using electronic data exchange (e-mail, WWW, webboard, blog, etc.), and collecting team's knowledge using Knowledge Management [KM].