Leading Practices and Key Performance Indicators for Asset Maintenance

As part of the WERF Strategic Asset Management (SAM) benchmarking activity, the research team identified three areas of competency of best management practices related to maintenance. To maintain continuity, the maintenance and KPI survey was broken down into the three broad competencies to help identify the best maintenance management performance indicators. The areas of competency were Strategy and Tactics, Work Flow Management, and Managing and Monitoring. Data was gathered from 27 utilities using Survey Statements and KPIs. Analysis results showed that there were no clear top performers who did everything well within the three categories. Therefore, the competencies were further broken down into 10 specific competencies: Overall maintenance strategy, Maintenance tactic selection, Information Technology Infrastructure, CMMS access and use Data quality, Planning and scheduling, Material management, Condition based maintenance, Reliability analysis, CMMS history and performance measures. There were clear top performers for these 10 competencies and the research team created Maintenance Practice Case Studies on these topics.

The research gathered information from the utilities on the Maintenance Program and the KPIs used to support the program through personal interviews, reports, data sheets, survey results etc. This information was used to create 5 case studies, each covering 2 maintenance practices and 1 utility. Each case study contains brief information about the utility, process of implementing maintenance practices, current program, KPIs to support the practice, value and lessons learnt for other utilities. The research indicated that the utilities were able to implement the maintenance practice successfully with external and/or internal help. The research also found that the implementation and integration of new maintenance practices were far reaching, having impacts to organization structure, the technology in use and asset maintenance.

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