

Executive Summary

Mobitel (Pvt) Ltd is a leading mobile operator in Sri Lanka and owns a 24% market share. It operates as a subsidiary of Sri Lanka Telecom and performs in a highly competitive environment where service quality and customer satisfaction are paramount important for business growth. Therefore, company expects to maintain their network availability above 99.95% which indicates a reliable service continuity.

In 2017, company has been able to maintain annual network availability at 99.86%, but average network availability in rainy seasons has been dropped to 99.66% causing an estimated revenue loss of LKR 18 M. Remote radio stations are more vulnerable for failures during extreme weather and availability drops are significant in certain regions.

This study aimed to improve network availability of Mobitel network during extreme weather conditions by enhancing field operational efficiency. Study used various information sources including company reports and records, interviews and author's own experience. Study framework was developed referring related literature.

Main causes of excess downtime in the rainy seasons were identified as prolonged commercial power failures and limitations in work process, resources and environment which cause delays and difficulties on fault attendance. Increased workload demands additional resources and challenges tacit knowledge based manual work management.

Study proposed three main solutions to overcome management challenges. Expanding availability of secondary backup power sources and ensuring high quality battery backups at critical sites were proposed to improve remote radio stations' power resilience. Automated assistance for informative management decisions was facilitated with a maintenance prioritization framework and an IT system. An emergency maintenance readiness framework was designed to ensure resource and skill readiness for critical situations. Key recommendations are set around on continuous maintenance improvements, systematic approaches for operations management and planned readiness for seasonal workload management.

With the successful completion of the project, it is expected to maintain network availability in Ratnapura region during high rainy seasons above 99.9%, keeping an estimated direct net financial profit at LKR 1 Million. Improved network availability enhances service quality by preserving customer satisfaction and loyalty as well.