

EXECUTIVE SUMMARY

Effective inventory management helps to reduce operational costs, improve efficiencies and consequently maximise the profits of companies. This Management Field Research Project (MFRP) will focus on the Procurement Department of Kent Engineers Private Limited (Kent), which is a pioneer engineering services provider based in Sri Lanka. The company has been in operation since 1991 specializing in Mechanical, Electrical and Plumbing (MEP) works and civil infrastructure projects. Inventory is a vital factor that impacts the timely completion of projects within the budgets. Therefore, the cost of inventory has a strategic importance for the future sustainability of the company.

The analysis on the financial audit reports from 2016/17 to 2020/21 has demonstrated that there is a significant increase in the cost of the inventory irrespective of the variations of the turnover of Kent. As of 2020/21 the inventory cost has recorded as LKR 119.87 million, which is equivalent to 12.55% of the turnover of Kent. Further analyzing the data from the procurement module of the Enterprise Resource Planning (ERP) system has illustrated that non-moving inventory cost, cost of material returns and cost of over ordering of materials are key contributing factors for the high inventory cost. Based on the performance gap, the root cause analysis was performed using cause-and-effect diagram. The three key project components were identified as non-moving inventory, material ordering and material purchasing for the analysis.

Following the root cause analysis, the literature review was conducted focusing on the identified root causes to provide a theoretical background from the existing literature. Accordingly, the literature review was focused on reducing non-moving inventory, inaccuracies in material estimation, inaccuracies of the inventory in ERP and poor data quality in the ERP system. The literature was applied to comprehend the problem areas as well as to identify probable solutions proposed by the scholars. These findings were utilised to develop the study framework for this project and to discover techniques that can be used to solve the performance gap. Several techniques such as process flowcharts, Key Performance Indicators (KPIs), training need analysis, training plan, automation of site inventory, job profiling and Work Breakdown Structure (WBS) were incorporated.

The main objective of this project is to reduce the inventory cost from the current value of LKR 119.87 million to LKR 85.11 million within 12 months of implementation of this

project. This will be achieved by reducing the cost of non-moving inventory from LKR 48.62 million to LKR 29.17 million, reducing the cost of material returns from LKR 45.38 million to LKR 34.04 million and reducing the cost of over ordering materials from LKR 4.03 million to zero. These project objectives would be achieved through various techniques, which were developed in detail through this project. Procurement Manager will act as the Project Manager to execute and overlook this project, whereas the author who is a director of Kent will act as the project coordinator and the head of the project. The individual responsibilities of the project team were clearly identified under the resource plan. The total estimated cost for the implementation of the project was computed as LKR 1,164,650.00.

The feasibility of the implementation of this project was analyzed through a benefit-cost analysis. It was computed that Kent would have a total direct and indirect tangible benefit of LKR 34,845,516.56 resulting in a benefit-cost ratio of 29.92. This value validates the feasibility and significance of solving this performance gap. Furthermore, the projected outputs and outcomes of this project were identified and presented for the benefit of the management of Kent.

Finally, the author sets out a detailed discussion on the projected outputs based on the project findings, literature review and the knowledge gained through the MBA course. Furthermore, the key short-term recommendations of the author were presented for the management of Kent for the successful implementation of this project. The key recommendations to reduce the non-moving inventory include, developing a KPI for the Procurement Manager, developing a process flowchart and creating a product catalogue. The material estimation to be enhanced through developing the existing ERP system as a cloud-based system to construction sites, providing training to improve the competency of technical staff and introducing a control point to check the quantity and budget of materials by introducing a rubber stamp prior to raising Purchase Orders (POs). Lastly, the costs related to material purchasing to be reduced by developing a user manual for the ERP system, providing training on using the ERP software, recruiting a competent person to monitor and validate the data quality and to do a development in the ERP system to conduct physical inventory counts without holding inventory transactions.